

Harvard Business Review

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October 2004

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To maintain its position as one of the country's largest property and casualty insurers—while also positioning itself to offer a broader range of financial products—Allstate wanted to offer new ways of interacting with customers, and to do it on an aggressive schedule. Building on a long relationship with Allstate, Accenture deployed eight development teams to help design and implement The Good Hands Network[®], which adds integrated Internet and call center channels to the existing system of local agents. Deployed in just 18 months, the two new channels enable customers to do business with Allstate 24/7. Already, over 40 percent of the company's more than 6 million yearly inquiries are made outside of traditional business hours, further extending the company's standing as a high-performance business.

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October 2004

62 Seven Surprises for New CEOs

Michael E. Porter, Jay W. Lorsch, and Nitin Nohria

As a newly minted CEO, you may think you finally have the power to set strategy, the authority to make things happen, and full access to the finer points of your business. Think again.

76 Blue Ocean Strategy

W. Chan Kim and Renée Mauborgne

When companies compete by grabbing for a greater share of limited demand, products turn into commodities and everyone gets bloodied. There is another way. With blue ocean strategy, growth can be both rapid and profitable.

86 How Industries Change

Anita M. McGahan

Research indicates that industries evolve along one of four distinct change trajectories, depending on whether their core assets or core activities (or both) are threatened with obsolescence. Your innovation strategy has no chance of succeeding unless it matches the industry's trajectory. Do you know which path you're on?



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HBR
Spotlight

The 21st-Century Supply Chain

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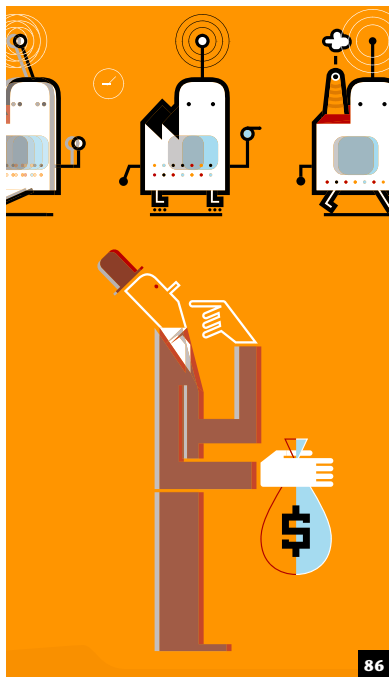
Hau L. Lee

Companies that focus on making their supply chains faster or more cost-effective won't stay ahead of rivals. Building a supply chain that is agile, adaptable, and aligned is the key to gaining the upper hand.

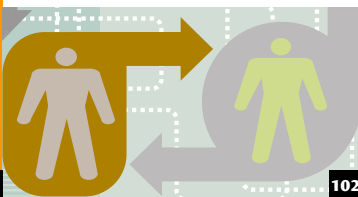
114 Leading a Supply Chain Turnaround

Reuben E. Slone

From competitive liability to world-class asset—here's how Whirlpool's supply chain organization reversed its downward spiral.



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The Macallan 18-year-old Single Malt

DRUNK BY PEOPLE
WHO SIGN OFF THEIR
OWN EXPENSES.



October 2004

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The more power you have, the more important it is to exercise your authority collaboratively. You may get your way acting unilaterally—but almost always at a cost. That's a good lesson not only for executives but also for companies.

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Reengineers should study past failures, not past successes...Just how friendly should team members be?...Control growth by building your sales force bit by bit...Beware the psychopaths in your organization...Does it matter if the CEO and the chair are two people or one?...The solid-state lighting revolution...Why business cycles don't matter...Surprising opinions about working mothers...How much feedback is too much?...The power of self-deprecation...Is R&D the enemy of innovation?...The allure of toxic leaders.

35 HBR CASE STUDY Civics and Civility

Leigh Buchanan

When a new employee injects political debate into the office bloodstream, the Clarion Company—once a politics-free zone—begins to feel like Sunday morning TV. As the energy level rises, feathers start to ruffle.

49 HBR AT LARGE Presenteeism: At Work— But Out of It

Paul Hemp

It's a problem that's estimated to cost U.S. companies more than \$150 billion a year in lost productivity: Employees are on the job but, because of illnesses or other medical conditions, not fully functioning. You can tackle presenteeism through targeted investments in your workers' health.



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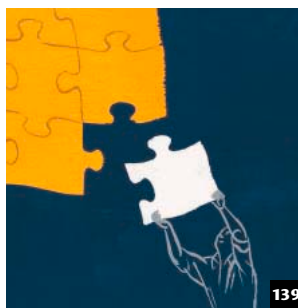
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122 BIG PICTURE America's Looming Creativity Crisis

Richard Florida

The United States has big and immediate problems, from the war on terror to the loss of manufacturing jobs to China, India, and Mexico. But the nation is overlooking the biggest threat to its economic well-being: the erosion of its creative talent, which has always been the true source of its growth.

139 BEST PRACTICE Cultural Intelligence

P. Christopher Earley
and Elaine Mosakowski

Misunderstand an action or gesture in an unfamiliar culture (whether a foreign country or the engineering department), and you're likely to find that any chance of cooperation has fizzled. But take heart. Cultural intelligence can be taught.

149 LETTERS TO THE EDITOR

Academics must help managers bust the fads if they want businesses to invest in valid ideas.

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160 PANEL DISCUSSION That Sunk Feeling

Don Moyer

The only thing less likely to make a right than two wrongs is one wrong mulishly pursued.



MEGABYTE:

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Linux strategy can take out
of your bottom line.

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In this month's HBR, you can discover what these exceptional students have taught their professors. While working closely with new CEOs, Messrs. Porter, Nohria, and Lorsch have learned that nothing in the executives' past, nothing in their training or experience, prepares them for the reality of the position. No two companies are alike, and neither are any two leaders, but there appear to be seven ways in which a new leader can almost count on being taken by surprise. As the new boss, you may know that you'll have to give up some involvement with operations in order to attend to outside constituents, for example, but you'll still struggle to deal with the feeling of being unmoored, of not knowing what's going on inside the company whose leader you're supposed to be. You may know not to be heavy-handed in exercising your considerable power, but you'll almost inevitably be startled to discover that even your lightest touch can strike someone else like a haymaker.

If these seven surprises add up to one lesson, it's this: The more power you have, the more important it is to exercise power collaboratively. You may get your way acting unilaterally – but almost always at a cost, and usually you have a smaller stock of power the next time you need it. Power and political capital grow when you act through others – work with your board, build allies, avoid unnecessary meddling in the responsibilities of subordinates and colleagues. In sum, never compete where you don't have to.

That's a good lesson for corporations, too. Competition, one of the most powerful forces on Earth, is also one of the most dangerous. Certainly it is an extraordinary motivator, whether in sports or in office politics. The competi-

tive struggle for existence drives all life on the planet; it is the necessity that mothers invention. The paradox is that the most successful companies compete by avoiding competitors. Competition is an anaconda that squeezes profits. That's how it works and why smart companies squirm out of its coils. Competition is crowded; smart companies prefer wide-open spaces. As Huckleberry Finn says at the end of his adventures, "I reckon I got to light out for

the Territory ahead of the rest, because Aunt Sally she's going to adopt me and sivilize me, and I can't stand it. I been there before."

Over many years, Chan Kim and Renée Mauborgne have argued, often in these pages, on behalf of the strategic logic of wide-open spaces. The authors, professors at Insead, call it value innovation – and their article in this issue, "Blue Ocean Strategy," elegantly and eloquently lays out both the logic behind it and the ways by which senior managers can steer their minds and their companies away from congested "red oceans," where competitive blood is in the water, to those market spaces where the opportunities for profit are as limitless as the horizon.

For the last several months, senior editors Leigh Buchanan and Gardiner Morse and art director Karen Player have worked with me on a new design for Forethought, the first section of HBR. They've done a wonderful job. Our purpose has been to focus more sharply on its mission – to survey ideas, trends, people, and practices on the business horizon. You'll still find the pointed conversations, management insights, and book reviews to which you are accustomed. You'll find also more emphasis on the "fore" in Forethought, as we work to provide you with early warning of ideas and research whose impact your business will feel in the future.

Thomas A. Stewart

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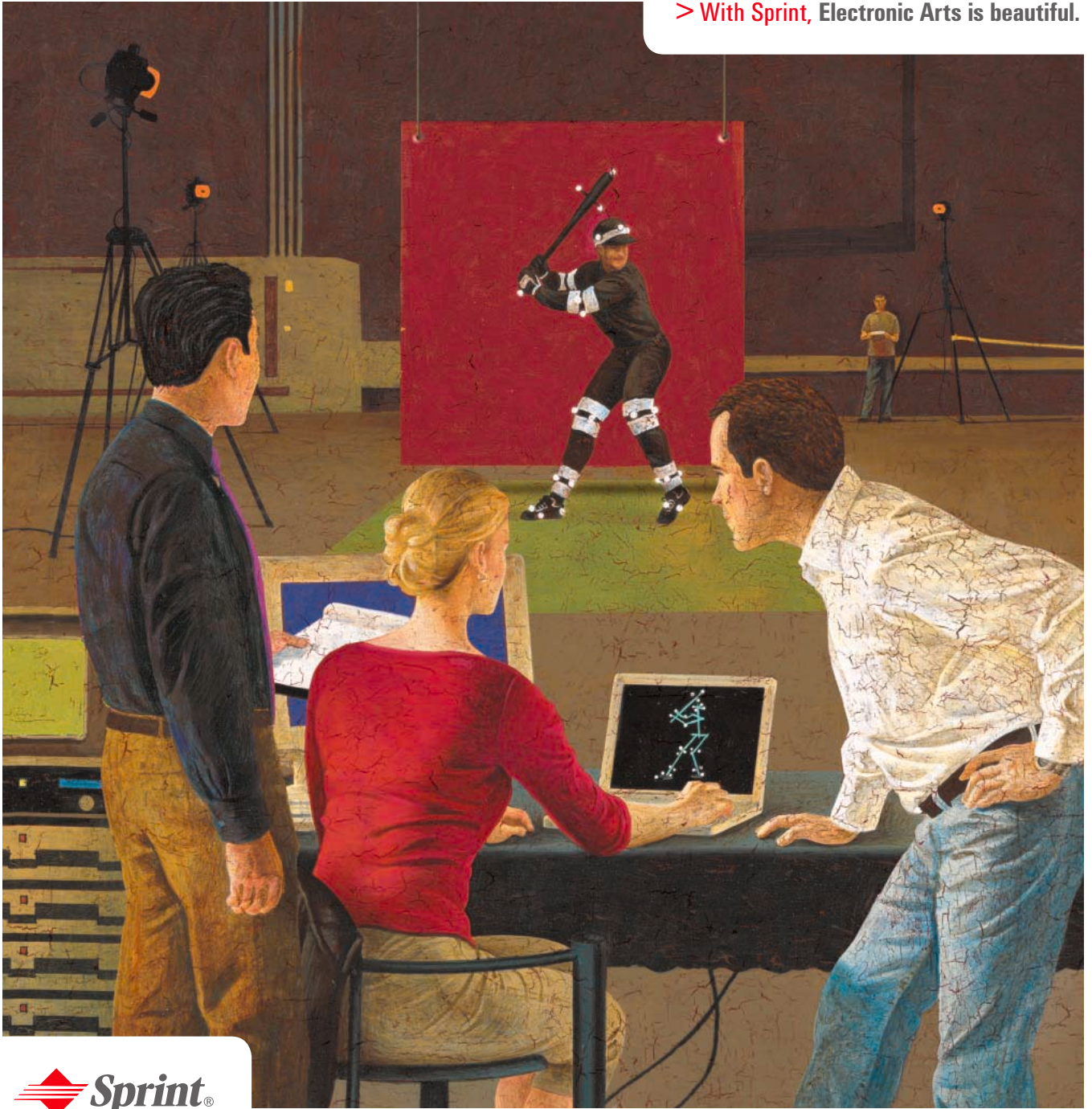
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forethought

A survey of ideas, trends, people, and practices on the business horizon.

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GRIST

Look First to Failure by HENRY PETROSKI

Engineering is all about improvement, and so it is a science of comparatives. “New, improved” products are ubiquitous, advertised as making teeth whiter, wash fluffier, and meals faster. Larger engineered systems are also promoted for their comparative edge: the taller building with more affordable office space, the longer bridge with a lighter-weight roadway, the slimmer laptop with greater battery life. If everything is a new, improved version of older technology, why do so many products fail, proposals languish, and systems crash?

To reengineer anything—be it a straight pin, a procurement system, or a Las Vegas resort—we first must understand failure. Successes give us confidence that we are doing something right, but they do not necessarily tell us what or why. Failures, on the other hand, provide incontrovertible proof that we have done something wrong. That is invaluable information.

Reengineering anything is fraught with risk. Take paper clips. Hundreds of styles were introduced in the past century, each claiming to be an improve-

JOSEF CAST

ment over the classic Gem. Yet none displaced it. The Gem maintains its privileged position because, though far from perfect, it strikes an agreeable balance between form and function. Each challenger may improve on one aspect of the Gem but at the expense of another. Thus, a clip that is easier to attach to a pile of papers is also more likely to fall off. Designers often focus so thoroughly on the advantages that they fail to appreciate (or else ignore) the disadvantages of their new design.

Imagine how much more complex is the challenge of reengineering a jumbo jet. The overall external form is more or less dictated by aerodynamics. That form, in turn, constrains the configuration of the interior space, which must accommodate articulated human passengers as well as boxy luggage and freight. As much as shipping clerks might like fuselages with square corners, they must live with whale bellies. It is no wonder that Boeing invited stakeholders, including willing frequent flyers, to participate in designing its Dreamliner—so the users would buy into the inevitable compromises. The resulting jetliner will succeed or fail depending on how convincingly those compromises are rationalized.

Logically speaking, basing a reengineering project—whether of a product or a business process—on successful models should give designers an advantage: They can pick and choose the best features of effective existing designs. Unfortunately, what makes things work is often hard to express and harder to extract from the design as a whole. Things work because they work in a particular configuration, at a particular scale, and in a particular culture. Trying to reverse engineer and cannibalize a successful system sacrifices the synergy of success. Thus John Roebling, master of the suspension bridge form, looked for inspiration not to successful examples of the state of the art but to historical failures. From those he distilled the features and forces that are

the enemies of bridges and designed his own to avoid those features and resist those forces. Such failure-based thinking gave us the Brooklyn Bridge, with its signature diagonal cables, which Roebling included to steady the structure in winds

he knew from past example could be its undoing.

But when some bridge builders in the 1930s followed effective models, including Roebling's, they ended up with the Tacoma Narrows Bridge, the third-longest

TEAMS

The Ties That Blind by JOE LABIANCA

Ropes courses help white-collar workers develop corporate collegiality through socializing, sweat, and sinew. Colleagues go in; friends come out. But wholesale congeniality can actually make teams less effective.

With my colleagues Hongseok Oh of Yonsei University and Myung-Ho Chung of Hansung University, I recently studied 60 teams in 11 companies representing a variety of industries. In the most effective teams, we found around half of the relationships among members were close enough to be considered friendships. In teams where that number approached 100%, performance dropped dramatically. Such groups suffer because they are insular, impermeable to outside influences, and unhealthily self-reliant. Sometimes those problems can be avoided by brainstorming or by assigning someone in the group to be a devil's advocate. But where friendships are especially close, even those techniques are unlikely to produce dramatically differing perspectives.

The friendships that benefit teams most are formed outside the group. Business-centered relationships with people in other parts of the company are important for transmitting simple work flow information. But even more important are relationships that extend into the social sphere—to lunches and dinners and after-work drinks—because they are especially fertile sources of social capital. Team members who socialize in this way, particularly with top managers and with leaders of other teams, bring back to their groups strategic information, task-related advice, and political and social support.

Top managers can't require employees to befriend people outside their own domains, but they can encourage it. Team leaders should be told that developing a broad social network is part of their job. Managers should set aside funds for cross-functional social activities and create opportunities for employees to bond around common hobbies or pursuits. When composing teams, leaders should consider whom—as well as what—potential members know. And mentoring programs should aim to place company fledglings beneath the wings of veterans from other departments rather than with people they work with every day.

My colleagues and I have nothing against corporate Outward Bound programs. But instead of braving the wilderness, teams should venture out into the far corners of their own organizations.

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suspension bridge in the world and the largest ever to collapse in the wind. In the process of “improving” on Roebling’s design, the very cables that he included to obviate failure were left out in the interests of economy and aesthetics.

When a complex system succeeds, that success masks its proximity to failure. Imagine that the *Titanic* had not struck the iceberg on her maiden voyage. The example of that “unsinkable” ship would have emboldened success-based shipbuilders to model larger and larger ocean liners after her. Eventually the *Titanic* or one of those derivative vessels would probably have encountered an iceberg—with obvious consequences. Thus, the failure of the *Titanic* contributed much more to the design of safe ocean liners than would have her success. That is the paradox of engineering—and of reengineering.

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HOW WE DO IT

The Littlest Sales Force

by BERNARD LIAUTAUD

Bernard Liautaud is cofounder and CEO of Paris-based Business Objects, a \$425 million developer of business intelligence software. Here he describes his incremental approach to building a global sales presence:

In their early years, companies often try to create large sales infrastructures as quickly as possible. They look at a market like Texas and say, well, there are 1,000 companies here that we can target, so we need ten sales teams on the ground right away, and each one can deal with 100 companies. But all they’re doing is guessing. They don’t really know what the market will bear. And if they’re wrong, they’ve wasted a lot of money on those sales teams.

When we launched Business Objects back in 1990, by contrast, we started with the smallest sales force possible, defined as a single two-person team per geographic market. So, for example, we deployed one unit—composed of a presales person and a salesperson—in Dallas. We knew they wouldn’t be able to handle all of Texas, but we gave them a detailed for-

mula for selling our products and then observed them for about nine months. When it became clear that there was enough business to support another two-person unit, we dropped one into place. We also used the first unit’s results to create productivity models for other units.

That strategy worked beautifully because it allowed us to grow incrementally and modularly. We just kept replicating these identical units, one in Britain, one in Rome, one in New York, one in San Francisco, one in Chicago. Each time, if the market proved fertile, we would drop in another unit, observe it for six months or so, and then add others, as needed. Our first five-year plan was predicated on building tiny blocks into larger blocks and building those larger blocks into a company.

Today we have more than 500 of these tiny units around the world (although, as a much bigger company, we have combined most of them into larger units, which have become our principal basis of analysis). For companies starting out, the lesson is this: Don’t focus on the size of the market; focus on how much business you can realistically do in that market. Build a model that lets you reach out gradually. And don’t move so fast that you run out of money.

Reprint FO410C

BEHAVIOR

Executive Psychopaths

Chances are good there’s a psychopath on your management team. Seriously. I’m not talking about the “psycho” boss that employees like to carp about—the hard-driving supervisor who sometimes loses it. He’s just difficult. Nor am I referring to the sort of homicidal “psychopath” Hollywood likes to serve up—Freddy Krueger, say, or Brando’s Colonel Kurtz. Neither is, clinically speaking, a psychopath.

I’m talking about the real thing, the roughly 1% of the population that is certifiably psychopathic. True psychopaths are diagnosed according to very specific clinical criteria, and they’re nothing like the popular conception. What stands out about bona fide psychopaths is



that they’re so hard to spot. They’re chameleons. They have a cunning ability to act perfectly normally and indeed to be utterly charming, as they wreak havoc on the lives of the people around them and the companies they inhabit.

Many of psychopaths’ defining characteristics—their polish, charm, cool decisiveness, and fondness for the fast lane—are easily, and often, mistaken for leadership qualities. That’s why they may be singled out for promotion. But along with their charisma come the traits that make psychopaths so destructive: They’re cunning, manipulative, untrustworthy, unethical, parasitic, and utterly remorseless. There’s nothing they won’t do, and no one they won’t exploit, to get what they want. A psychopathic manager with his eye on a colleague’s job, for instance, will doctor financial results, plant rumors, turn coworkers against each other, and shift his persona as needed to destroy his target. He’ll do it, and his bosses will never know.

That makes them particularly dangerous to organizations, says Robert Hare, a University of British Columbia psychologist whose psychopathy checklist, the

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PCL-R, is used worldwide to screen for psychopathic personalities. Hare believes that psychopaths are increasingly common in business because they're attracted to the pace and volatility of today's hyper-competitive workplaces. And because companies unwittingly nurture them, Hare and his colleague Paul Babiak, a New York-based industrial psychologist, think they're rising through the ranks. To find out, this summer Hare and Babiak began testing a screening tool specifically devised to expose psychopathy at work.

Some of these people are undoubtedly in your organization, and you certainly don't want to promote them. How do you tell a true high-potential from the likely psychopath? Hare's track record in the field suggests that the experimental screen he and Babiak are currently testing, the 360-degree B-Scan, could become the standard tool for exposing corporate psychopaths. But it will be some months before the preliminary data are in and the tool's validity can be evaluated.

In the meantime, companies can do several things to contain psychopaths at work, Hare and Babiak say. First, make it easy for rank-and-file workers to express concerns about colleagues. Have an ombudsman or an anonymous tip line. Because regular employees are less useful to a psychopath than leaders, the psychopath's mask will often come off in front of staff, and employees will pick up on the psychopath's game before management does.

Second, thoroughly cross-check your impressions of your high-potentials with colleagues who know them well. A psychopath will tell you exactly what you want to hear, and it may be quite different from what he tells others. When the stories don't jibe, take a closer look.

Finally, be self-aware. Leaders are famously conscious of their strengths but often clueless about their vulnerabilities. A psychopath will manipulate you by exploiting personal weaknesses. Learn about your weaknesses (a coach can help), and beware when someone seeks advantage by playing on them.

—Gardiner Morse Reprint FO410D

Opinion

by CHARLES M. ELSON

Separation Anxiety

Knowing the value of two heads, why would anybody opt for one? That question is posed by proponents of separating the CEO and chairperson positions at public corporations. In 2001, 45% of companies did so, according to Institutional Investor Services. By 2003, that number was 50.4%, and it is growing, with recent converts including Disney, Oracle, MCI, Dell, and Seagate. The issue is high on the agendas of many institutional investors as well.

The argument for separation is compelling. The board, after all, is supposed to oversee management for shareholders' benefit. Does it make sense for the head of that monitoring body to also be the chief subject of its scrutiny?

But a hydra-headed management structure creates two substantial risks. First, establishing dual centers of authority may compromise the CEO's ability to run the organization, tempting disgruntled or ambitious subordinates to do an end run around the chief executive and consult the chair on controversial managerial decisions. The organization's unified message splinters. Discipline suffers.

The second potential casualty is the board's effectiveness. Legally, every director has the same obligation to actively monitor management. But directors—like most human beings—are happy to off-load responsibility onto someone they trust. Other board members may assume the nonexecutive chair is paying the necessary attention to management and so pursue their own responsibilities less diligently.

How can companies bridge the gap between theory and practice? Putting the perfect individual in the chair's position obviously helps. The job requires a person whose ego is secure and whose leadership inspires. A person who understands that he or she is there to run the board, not to co-manage the organization. A person who can excite enthusiasm and creativity in colleagues. Such people, unfortunately, are in short supply. So unless we can clone directors like Ralph Whitworth (Waste Management, Apria Healthcare); Jack Krol (MeadWestvaco, Tyco); or Ken West (TIAA-CREF, Motorola), we're still in theory territory.

A more practical solution is to stop wringing hands over who fills the chairperson slot and focus instead on the rest of the board and its committee structure. To maximize effectiveness monitoring, a substantial majority of directors should be independent and hold meaningful long-term equity positions. Independent directors should make up and chair all the major oversight committees. Committee heads should set oversight agendas for their areas, and they should rotate every few years. Under this model, every independent director assumes equal responsibility for the board's performance.

Of course, the bulk of the board's monitoring activities takes place within committees. Unfortunately, little work—empirical or analytical—has been done to understand how these bodies function and how they might do a better job. If shareholders focused more on the composition, structure, and activities of these committees, they would be a stronger force for oversight.

Obviously, this is not the perfect solution. But separation is riskier and less likely to work. The question is not whether to concentrate authority in one person or divide it between two. The question is how to make sure those clustered around the authority are doing their jobs.

Reprint FO410E



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The Light Fantastic

by AMY SALZHAUER

Next time you're stopped at a red light, take a look at the light itself. More than 50% of red traffic lights in the United States now use solid-state lighting, a semiconductor-based technology that is quietly transforming the \$79 billion world lighting market. More than 80% of all European cars sold this year will use semiconducting materials called light-emitting diodes (LEDs) to illuminate the dashboard panel. Close to \$3 billion worth of high-brightness LEDs are sold annually for applications like backlighting in cell phones, and most of the automotive brake lights in the States are long-lasting LEDs. "Solid-state lighting is the first truly new lighting technology to emerge in almost 100 years," says Nadarajah Narendran, the director of research at Rensselaer Polytechnic's Lighting Research Center in Troy, New York.

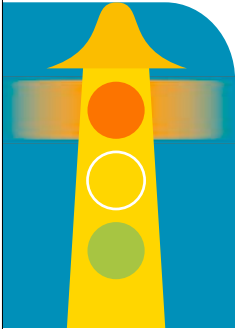
Tech Talk: LEDs are basically tiny semiconductor chips that glow when electricity runs through them. The wavelength of light produced is dependent on the composition and structure of the

chip, so LEDs generally put out light in a specific color. Highly energy efficient, they emit far less heat than traditional light sources. The trick has been to get LEDs to emit bright light in the

right colors. Scientific breakthroughs in the mid-1990s made the production of white light—long a holy grail for LEDs—commercially viable. LEDs still need considerable improvement in areas like heat tolerance and efficiency as they come to the mass market, but even some currently produced LEDs are expected to last an amazing 20 to 30 years with little or no maintenance.

Why It Matters: While the solid-state revolution will probably never completely

continued on page 26



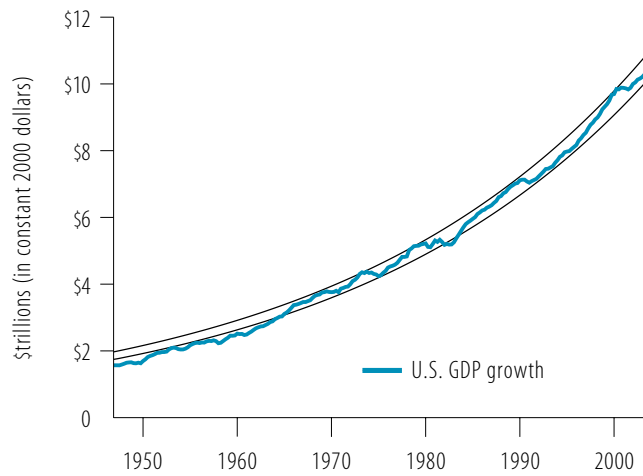
Data Point

by EDWARD E. LEAMER

The Truth About GDP Growth

Fact: GDP growth in the United States has been confined to a narrow corridor for over 30 years.

This figure depicts the growth of U.S. real GDP. The two curved lines bracket the narrow corridor within which GDP has been confined for more than 30 years. Real GDP has grown at the average rate of 3% per year and has oscillated within a narrow corridor that is plus or minus 3% wide. That's the 3–3 rule of U.S. GDP.



With the U.S. presidential election upon us, the CEO (currently Mr. Bush) and CFO (Mr. Greenspan) of U.S.A. Incorporated should recognize that, rhetoric notwithstanding, the change in the nation's management every four or eight years has had no discernible effect on the long-run rate of GDP growth. Nor have oil shocks, foreign conflicts, tax cuts, expanding deficits, market bubbles, or record-low interest rates. Regardless of environmental stimuli, GDP has grown—with some downs (recessions) and ups (recoveries)—within a narrow corridor.

Faced with that reality, the president and chairman should focus on minimizing the damage that short-term volatility causes. Pursuing higher long-term growth through political and economic manipulation hasn't worked and probably has increased volatility, not decreased it. Note that the graph indicates another down and up in this current decade. Looking forward to the next dip, governments and companies with cyclical revenues should mind their debt loads today to make debt servicing manageable down the road.

Like the CEO and CFO of U.S.A. Incorporated, business executives should heed this graph's broad message. Keep the facts on the table. Base decisions on broad trends, not temporary bumps. And stand vigilant against rhetoric that masquerades as truth and distorts decision making.

DATA SOURCE: Bureau of Economic Analysis, U.S. Department of Commerce

Edward E. Leamer is a professor of management, economics, and statistics at the University of California, Los Angeles, and the director of the UCLA Anderson Forecast. He is the consulting editor of *Data Point* and welcomes chart submissions: Send to Leamer.HBRGraph@anderson.ucla.edu.

Reprint FO410G



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displace the world's massive installed base of incandescent and fluorescent lighting, it may dramatically change lighting form factors in homes and workplaces, significantly reduce energy use, affect industrial profit margins, and light up remote areas of the world.

"You can now completely rethink the packaging of light: It will transform the lighting-fixture industry," says Charles Stone, managing/design principal of architectural lighting design firm Fisher Marantz Stone in New York. Just imagine ceiling tiles that light up and wallpaper that glows.

The potential energy savings are also dramatic. Sandia National Laboratories predicts that solid-state lighting could decrease global electricity consumption 10% by 2025. The technology's efficiency will probably be felt in factories and other environments where conventional lighting generates significant heat, accounting for much of the air-conditioning load. International organizations have started bringing solid-state light to villages far from the grid. LEDs can "light an entire rural village with less energy than that used by a single conventional 100-watt lightbulb,"

reports the nonprofit Light Up the World Foundation.

In the Game: All the major traditional lighting manufacturers, such as Philips, Osram, and GE Lighting, have launched joint ventures in solid-state lighting manufacture or design. Hundreds of companies are making and packaging LEDs, including Nichia and Toyoda Gosei of Japan; Lumileds (a joint venture between Agilent and Philips Lighting) and Cree in the U.S.; and Europe's Osram Opto Semiconductors. A number of small firms, like Boston-based Color Kinetics, are pioneering the control and design of solid-state lighting systems.

Reprint FO410F

DIVERSITY

The Maternal Wall

by JOAN C. WILLIAMS

While some women stand nose pressed against the glass ceiling, many working mothers never get near it. What stops them is the "maternal wall." Where mothers are concerned, coworkers and bosses often perceive a trade-off between competence and warmth.

That's what I found when I reviewed the research on stereotyping in the workplace. Social psychology studies report that businesswomen typically are seen as high in competence: right up there with businessmen and millionaires. But working mothers are rated less like businesswomen and more like housewives, who—to quote the terms used by researchers—are viewed as on a par with the "elderly, blind, retarded, and disabled."

Women who have been very successful may suddenly find their proficiency questioned once they become preg-

nant, take maternity leave, or adopt flexible work schedules. Their performance evaluations may plummet and their political support evaporate. The "family gap" yawns: An increasing percentage of the wage gap between men and women is attributable to motherhood.

When a childless woman is not in the office, she is presumed to be on business. An absent mother is often thought to be grappling with child care. Managers and coworkers may mentally cloak pregnant women and new mothers in a haze of femininity, assuming they will be empathetic, emotional, gentle, nonaggressive—that is, not very good at business. If these women shine through the haze and remain tough, cool, emphatic, and committed to their jobs, colleagues may indict them for being insufficiently maternal.

Compounding the problem, managers can from the most benevolent of motives deny mothers the chance to shine. Not wanting to separate mother and child, supervisors may rethink the new parent's responsibilities, eliminating travel or projects that require long hours. Employers can even end up indirectly meddling in what should be private, family decisions. One manager began sending a new mother home at 5:30—she had a child to take care of. But he gave her husband extra work that required him to stay late—the father now had a family to support. Though the manager meant well, he created workplace pressures that all but forced the couple into traditional gender roles they might not have chosen for themselves.

Maternal stereotyping is not only a career problem for women; increasingly, it is also a legal problem for employers. American University's Program on WorkLife Law has identified more than 40 cases—some involving substantial monetary rewards—in which courts ruled in favor of plaintiffs contesting employers' treatment of family caregivers. Most cases involve mothers, but some involve fathers or adults caring for ailing parents or spouses. In April, a landmark federal case, *Back v. Hastings-on-Hudson Union Free School District*, held that an employer who assumed that a mother was less committed to her job because of home

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responsibilities was engaging in potentially illegal gender stereotyping.

What is an employer to do? Including parental and caregiver status in antidiscrimination policies and educating supervisors about what constitutes caregiver discrimination are good first steps. Examining hiring, attendance, and promotion policies to make sure they are free from biased standards is also important. Thinking flexibly about how job

duties can be accomplished and making personnel decisions based on legitimate business needs rather than on assumptions about commitment and productivity will also help prevent lawsuits.

Employers can protect themselves both by eliminating stereotypes about caregivers from personnel decisions and by proactively creating programs that support all employees' caregiving needs.

Reprint FO410H

MOTIVATION

Feedback Backlash

Managers have a rep for being stingy with feedback. Sometimes, though, they're way too generous. In their hopes of lifting performance with a flood of constructive comments, these well-meaning managers end up depressing productivity by drowning the beneficiaries in a sea of unwanted input.

Alain Gosselin, a professor of human resources management at HEC Montréal, has studied how call center employees at a large telecommunications company respond

to feedback. Call centers make ideal laboratories for studying feedback because their managers are extreme practitioners of the art. At the center Gosselin and his colleagues observed, all employees received 27 feedback sessions a year based on minute-by-minute electronic monitoring and supervisors' personal scrutiny of their phone conversations with clients.

The researchers gave 342 employees questionnaires that asked about their stress levels, the value they placed on the comments they had received, and their desire to respond to those comments. Their managers were asked to rate each employee's performance.

The greater the "feedback overload"

employees reported, the more stressed they were, the less they wanted to respond, and the lower their performance as rated by their bosses. Although everyone received the same amount of feedback, some employees felt overwhelmed, while others didn't. So determining just how much is too much is quite subjective.

Few workplaces coach employees the way call centers do; you can't conclude that giving such intensive feedback in a different environment would have the same corrosive effect on performance. But this study should alert managers to the possibility. Ask yourself, Do you know whether the feedback you give works? Are you giving too much? You might want to check in with your reports: They're the only ones who really know.

—Gardiner Morse

Reprint FO410J

MANAGING YOURSELF

The Joke's on Me

In his book *Clinton & Me*, humorist-for-hire Mark Katz describes the former president's aversion to using an egg timer as a prop during a speech. This was in January 1995, and Clinton was taking flak for his windy orations, particularly a recent State of the Union address that clocked in at 81 minutes. Katz, who was charged with writing the president's annual humorous speeches for the press corps, wanted Clinton to walk to the podium, take out the egg timer, and set it for five minutes before speaking. The president was then supposed to reset it periodically throughout his presentation.

The egg timer gag was funny and surprising (Clinton eventually used it when his prepared remarks fell flat), but, more important, it gave the president a chance to be self-deprecating. Self-deprecation, says Katz, who now works on humor-writing projects for CEOs as well as politicians, is one of the most effective tools for leaders who want people to like and trust them. "It communicates strength and grounding," he explains.

Skillful self-deprecation involves poking gentle fun at some well-recognized aspect of yourself. To work, the joke should be thoughtful and directed at a genuine vulnerability, even if it is a modest one. "Reflexive, perfunctory humor, like introducing your wife as 'your better half,' doesn't work," says Katz. Most people's public personae are made up of two to 12 simple, widely known facts, Katz contends, and you should choose among yours for the subject of your jokes. George W. Bush, for example, wisely draws attention to his own malapropisms. "Every time he makes a joke about mangling the English language, he makes it harder for people like me—Democratic wiseacres—to make that joke," says Katz. "He takes ammunition out of the hands of Jay Leno."

"If you concede the obvious you're conceding nothing, but you gain back credibility," Katz says. "That's a trade you should make every time."

—Leigh Buchanan

Reprint FO410K



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Conversation

HERB BAUM ON INNOVATION

Leapfrogging R&D



Herb Baum understands why companies choose to be fast followers. But that strategy is not for him. He didn't like it when he was CEO of Quaker State in the 1990s, and he doesn't like it now that he's president and CEO of Dial, the \$1.3 billion maker of soaps, detergents, and other products. (Dial, which is based in Scottsdale, Arizona, was acquired by Germany's Henkel Group in March.) Baum is transforming Dial from a company that made goods a little different and a little cheaper than its competitors into an upstart product pioneer. Since Baum came on board, the company has more than doubled its patent filings and embarked on an innovation campaign that extends from scientists to secretaries. HBR asked Baum about the innovation mill he is erecting at this once-staid company.

When you joined Dial in 2000, it hadn't had a breakthrough product since 1988. How did you convince people that you were serious about innovation?

I needed employees to start thinking about their jobs as innovating, not just researching and developing. R&D means improvements to existing products, quality assurance, line extensions. Innovation is something truly different in the market that makes your customers' lives better. So right away we changed the name of the Dial Research and Development Center—which is in a separate building here—to the Dial Center for Innovation.

Then I sat down with our then-head of R&D and I said, "How many innovation projects are you working on?" And he said, "158." Well you can't be working on 158 real innovations. So I said, "You can work on three." Based on the number of scientists we have—and our budget—I thought that's what we could handle. The innovation group is free to do research and idea generation for 20 products if they want. But we will only spend money on and develop three at a time.

We also started giving awards for innovation, and I created a position of vice president for innovation, which reports to me. And we said to each of our scientists: You must develop two new patentable ideas per year in order to work here.

How did your scientists react to that?

We've turned over the top management in that group from caretakers to a more aggressive leadership. All of our innovation group heads are new, from companies like Colgate, and L'Oréal, and Unilever. Among the staff, though, there's been minimal turnover. And it's really focused them on their mission. Before, they were looking more at iterative things. But in the past 12 months, they've developed 96 new products outside the "big idea" innovation process, including formulas, fragrances, and packaging.

Do you involve employees not in product development?

We believe that ideas come from everywhere. So we've started an annual Innovation Day, where employees learn about creativity and generate ideas. All 650 employees here in Scottsdale participate. On Innovation Day last year, we scattered pet food and spilled drinks and dirt all over our kitchen areas and rest rooms. Then we divided employees into groups and had them brainstorm ideas to clean up the mess. They came up with hundreds of ideas worth further evaluation and several that have moved into concept testing.

Are you soliciting ideas from outside the company too?

When I was president of Hasbro, I learned how creative independent inventors are. At the annual Toy Fair, we would wine and dine inventors in hopes that they would come to us with their great ideas. When I got here, I thought we could do even better. So we created a competition called Quest for the Best, which solicits product ideas through inventors' organizations and publications. We had the first one in May 2004. The inventors were very enthusiastic. Most big companies won't even talk to them. We received thousands of entries. About 300 fit well enough with our product segments and were far enough along that we did a full evaluation. We then invited the 13 finalists to a big dinner and set up a booth for each so our employees could wander around and see the inventions. We gave cash awards to the top three ideas, and, if there's enough consumer interest, we will license and develop them. I expect to do this at least once a year from now on.

Reprint FO410L

BRUCE RACINE



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TO FUEL IT.

Patrick Foody Sr. is a determined man. Some 30 years ago, he had a visionary idea. He would produce ethanol, a vital ingredient in transportation fuels, from agricultural wastes like cereal straws and cornstalks.

Contemporaries doubted him. Initial attempts were costly. Still, Pat and his colleagues at Iogen Corporation pressed on. After much dogged persistence, and with help from

Shell, they found ways to make large-scale production a commercial reality. It may be a while yet before alternatives such as EcoEthanol™ can become a major source of energy. But by seeking out partners

like Pat, we're hoping to bring that day a step closer. Visit www.shell.com/biofuels for more information.



Reviews

The Allure of Toxic Leaders

Why We Follow Destructive Bosses and Corrupt Politicians – and How We Can Survive Them

Jean Lipman-Blumen

(Oxford University Press, 2004)

Bad leaders are like 17-year locusts: When they show up en masse, the public greets them with fascination and revulsion. The current prolonged infestation naturally provokes questions both analytic (Why do they do what they do?) and introspective (Why do we let them do what they do *to us*?). Jean Lipman-

Blumen believes the two queries are related. Her book's most provocative contention is that followers drive nontoxic leaders into toxicity by making impossible demands for security, glory, or meaning.

That argument may surprise leaders, who are used to seeing only the fruits of their own influence. But just as followers want to satisfy leaders' requirements, so leaders want to fulfill followers' needs. The needs at issue here are psychological rather than material, among them safety, excitement, and center-of-the-universe-grade significance. In response to such implicit demands, Lipman-Blumen warns,

some leaders change. They take foolish risks. They traffic in illusions. They play God. Subjected, over time, to the heat of followers' desires, benign—even admirable—leaders start to spoil.

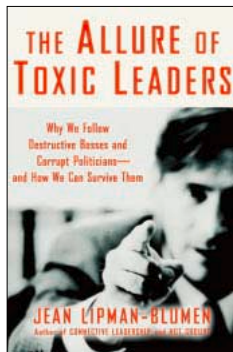
Lipman-Blumen exhorts followers to recognize their complicity in elevating and sustaining tyrants and then to do something about it. At its best, *Toxic Leaders* engenders the renewed hope and ennobled flush of good survivor literature. Drawing on interviews conducted at more than 70 companies, the author illustrates how resilient followers can wring some good—organizational, social, or psychic—from their encounters with toxic leaders. She recommends that workplace victims try inserting their own leadership skills into the vacuum, learn from negative examples, and enhance organizational cohesion by bonding with fellow sufferers. The most intrepid can organize resistance.

Other sections rely less on the author's interviews and more on published examples. Some (Giuliani, Enron) are tired, others fresh and wonderfully eclectic. A few feel simply off point. For example, several anecdotes depict followers who unseat benign leaders or cause them to commit errors—hardly the same thing as turning them toxic. In addition, Lipman-Blumen blames the media for lionizing leaders into arrogance or scaring them into inaction. But isn't it also possible that publicly exalted leaders will seek to buff their halos through more enlightened management?

The Allure of Toxic Leaders devotes copious space to the internal and external influences that make followers vulnerable to charismatic cads. It's an astute analysis—the author can't be blamed if such factors as war, terrorism, and corporate malfeasance also contribute to virtually every other modern ill. And her consideration of political as well as business leaders enriches the discussion.

In fact, the book might have its most profound influence packaged with voter education guides.

— Leigh Buchanan



The Origin of Brands: Discover the Natural Laws of Product Innovation and Business Survival

Al and Laura Ries

(HarperBusiness, 2004)

The fittest brands evolve within clear product categories, says this pair of marketing consultants. Building on that premise, these Darwinists offer survival advice for companies in many situations. For example, if you're extending your brand, beware of upstarts focused fiercely on your new category. (Think Motorola versus Nokia.) If another brand has staked out your target, try fragmenting the category, as Wendy's did by anointing itself the burger joint for adults. (Burger King had less success trying to be McDonald's only better.) Illuminating examples and wry humor combine for a delightful read.

The Second Century: Reconnecting Customer and Value Chain Through Build-to-Order

Matthias Holweg and Frits K. Pil

(MIT Press, 2004)

Lean distribution is the answer to auto-makers' woes, these academics maintain. Building to order would free up the working capital wasting away on dealers' lots, end gimmicks used to clear inventories, get customers the cars they want quickly, and force the industry past its counterproductive obsession with reducing costs. Lacking a case study, the authors can't prove that such gains outweigh the loss of scale economies. But if you mean to be lean, *The Second Century* shows you how.

Neoeconomy: George Bush's Revolutionary Gamble with America's Future

Daniel Altman

(PublicAffairs, 2004)

While everyone else dissects the Bush team's military strategy, Altman demystifies its economic policy. The White House's supply-side ideology out-Reagans Reagan, argues the journalist and economic adviser. By eviscerating all taxes that might impede saving and investment, the administration hopes to generate enough new investment capital to raise everyone's living standard for good. That policy makes some sense, concedes this mostly fair book, but the risks, including greater social inequality and a sudden, severe increase in other taxes, are huge.

— John T. Landry

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Civics and Civility

by Leigh Buchanan

Employees' newfound passion for politics has transformed the Clarion Company into a stimulating workplace, but now feathers are starting to ruffle. Should managers put the kibosh on political debate at the office?

JOAN MUNGO SYMPATHIZED with the contents of her trash compactor. The crowd in Denver's Civic Center Park was packed so tight that if she fainted—"and if it gets any hotter I will faint," Joan silently threatened the weather gods—there was no place to fall. "I'd check the time," she told her friend Maria, who was wedged in beside her on the grass, "but I can't raise my arm high enough to read my watch."

Still, the discomfort detracted little from her excitement. On this Wednesday afternoon in July, Joan and half a dozen colleagues from the Clarion Company were skipping lunch to watch presidential hopeful John Kerry stump. It was Joan's first-ever political event, and at 34, she had the strange, exhilarating feeling of coming of age. Until recently,

Joan had treated politics like football: as something she could simply choose to ignore. Never having voted, she assumed she was a Democrat because her parents were. ("I'd vote for the Democratic ticket if Satan was running on it," her father liked to say. "And sometimes he is.")

Certainly Joan's work life had never challenged her apathy. The Denver office of Clarion, a \$30 million full-service marketing company, had always been a politics-free zone. This was not a conscious decision by management. The employee code of conduct didn't address the topic; there had been no need. Joan, who had joined Clarion ten years earlier and risen to general manager, could recall having precisely two political conversations in that time. Once, in

HBR's cases, which are fictional, present common managerial dilemmas and offer concrete solutions from experts.

1996, a new hire had asked jokingly which candidate the CEO supported so he would know whom to vote for. Two years later Joan had suggested an employee lose his anti-Clinton button because it bore the word “bimbo.”

At Clarion, nonwork conversations concerned families, romances, the state of the powder at Aspen. If, as a result, the office sometimes seemed detached from the wider world, no one cared.

But that had changed eight months ago, with the arrival of Marcus Lippman.

Marcus followed the presidential campaign with an avidity his colleagues reserved for the fate of contestants on *American Idol*.

A senior project manager hired away from a rival firm in Chicago, Marcus was both charming and aggressive about meeting his new colleagues. He dropped into cubicles. He asked people out for coffee. At lunchtime, when everyone swarmed around picnic tables hunkered in the shadow of the snow-draped Rockies, Marcus made it a point to sit with a different group each day. “I like to get as deeply involved as possible as quickly as possible,” he had told Joan. “To do that, I have to be a known quantity.”

Marcus was no demagogue, but neither was he shy with his opinions. During morning encounters in the mail room or kitchenette, he would often allude to the day’s headlines. In particular, Marcus followed the presidential campaign with an avidity his colleagues reserved for the fate of contestants on *American Idol*. His comments, though provocative, were never inflammatory, often conveying amused disbelief at the desperation of the Democrats (whom he disagreed with, but not vehemently) or the missteps of the Republicans (whom he supported, but not passionately). Those informed enough to respond generally did so. Over time, others joined in. As like recognized like, conversations grew longer; when dis-

cordant views intruded, the discussions grew more animated. Meanwhile, employees embarrassed by their lack of knowledge paid more attention to the news, particularly editorials, whose viewpoints they first aped but soon found themselves sharing.

Politics entered the office bloodstream. It became the stuff of e-mail exchanges and watercooler chat, finding a natural place alongside work and personal concerns. Employees sensed a new mental energy, a feeling of engagement

that intensified as the campaign season progressed. Several had commented favorably on the change to Joan. The parents of young children, who relied disproportionately on their workmates for intelligent adult conversation, were particularly pleased.

Not wanting to appear ignorant in front of the staff, Joan, too, began to pay more attention to current affairs. Politics didn’t subsume her life—it would never do that—but now she made a concerted effort to venture beyond the business pages and added NPR to the preset buttons on her car radio. One morning, after reading Paul Krugman’s column in the *New York Times*, she was so incensed at the Bush administration’s tax policies that she couldn’t finish her muffin. At that moment, Joan realized she had gone from knowing to caring. It was a good feeling.

In the park, Joan sensed a change in the air. Stretching to peer above the ocean of humanity, she saw several figures mounting the stage. All she could make out were heads of hair: The tallest and thickest she took to be Kerry’s. Managing to raise her hands high enough to join the applause, she yelled over the din to her colleagues: “It’s a shame that production meeting is going on now. Some of those folks really wanted to be here. We should snag buttons for them on the way out.”

An Activist in Their Midst

It was impossible to miss. The newspaper had been propped against her monitor, the offending article circled with a fat red marker, and a five-by-eight-inch Post-it note (“I didn’t know they even made them that size,” thought Joan) slapped on beneath: “HAVE YOU SEEN THIS????!!!!” As Joan set her teacup on top of a stack of legal pads and deposited the Kerry buttons in a drawer, Stuart Baize plowed into her office, seething like some refugee from an R. Crumb cartoon.

“Two minutes,” commanded Joan, forestalling his outburst with a traffic-cop gesture. Calmly, with perhaps a soupçon of excessive dignity, she sat, took a demure sip of tea, and began to read the article.

The offending item appeared in the letters column of the *Denver Post* beneath the headline “Earth to Bush.” Its author had checked all subtlety at the door. It began: “From their corrupt energy policy to their tolerance for the befouling of our air to their lackadaisical stewardship of our national parks, the Bush team has consistently shown that this land is their land and they’ll do what they like with it....” Buzz-sawing through the invective, Joan was brought up short by the attribution: Dominique Ferrers. Like Stuart, Dominique was an account manager at Clarion.

“You disagree with Dominique,” Joan said carefully, folding the paper and handing it back to Stuart. “I understand that. I sympathize. But these are solely her opinions, to which she is undeniably entitled. It’s not—”

“It’s crap is what it is,” Stuart interrupted. “Does she want to be at the mercy of foreign oil? Does she care about all the jobs Bush is saving? And she’s such a damn hypocrite. Have you seen that truck she drives? No, it’s more like a tank. No, wait, what’s bigger than a tank?”

“Well, she does have four children,” hedged Joan. “My point, Stuart, is that she never mentioned the company’s name or suggested she is representing anyone but herself. This is not Clarion’s concern.”

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"But 'Dominique Ferrers' is an unusual name," Stuart persisted. "People will recognize it. They'll make the connection." His scowl relaxed into a sly smile and he plucked at his sleeve. Joan almost expected him to draw out an ace. "Eliot Stotts will make the connection," Stuart said.

A suggestion of curdled tea licked at the back of Joan's throat. Eliot Stotts was president of AllTerrain, a major manufacturer of snowmobiles, Jet Skis, and dirt bikes. Dominique had won the account in 1999 and managed it ever since.

AllTerrain was now worth almost a million dollars a year to Clarion.

"Now, if I am Eliot Stotts," Stuart continued, clearly enjoying himself, "I'm not thinking the current stewardship of our national parks is lackadaisical. I'm thinking it is quite good. I'm thinking it fairly balances respect for nature with the reasonable desire of people to enjoy nature. And I'm also thinking that maybe Dominique Ferrers does not get this, and that maybe Clarion, which employs said Dominique Ferrers, is not the best place for me to spend my money."

Joan shut her eyes hard, then opened them. Stuart was gazing at her expectantly. "Look, Joan," he said, "I think Dominique could cost us this business. Now Eliot and I, we have a lot in common. We're both outdoors guys. We're both Republicans. We connect on all these different levels. So I'm thinking maybe the thing to do is to let me —"

"I want to see how Eliot reacts," said Joan. "But I understand this could become a problem, even if he doesn't see the letter, and yes," she spoke quickly to cut Stuart off, "I know he will see it."

Look, I'm not going to commit to anything. But I'll consider the whole issue, Stuart, OK?"

"Well, good. Thanks." Stuart turned to leave, paused, and turned back. "You know, you ought to tell Dominique to cut out this activism stuff. Clarion does business with a lot of different people. There's no telling who she's going to twig off. Do we really want to take that chance?"

As the door closed behind him, Joan poured her now tepid tea into a pot of nasturtiums.

The Town Hall Time Sink

Friday evening had not gone well. In the middle of dinner, Joan's date had winked at her, stood up, and strolled over to a table of perhaps a dozen women, most of them pushing 50. "Hello, girls," he had greeted the party in a jocular tone. "And what sorority do you belong to?"

Home by 8:05, Joan was battling her resolution not to read e-mail after 8. But she had been away from the office since lunchtime visiting a vendor and hadn't checked messages in the interim. "If there's something awful, I won't be able to sleep," she thought. "But if I don't know whether there's something awful, I won't sleep either. And if I know there's nothing awful I *will* be able to sleep. So..."

Logging on to Clarion's network, Joan ran her eyes down an alarmingly long column of boldface subject lines. At the very bottom was a message from Maria Praxis titled "FW: More on Tax Cuts." The next one up was from Cynthia Chase: "RE: More on Tax Cuts." Then from Stuart: "RE: More on Tax Cuts." Thirty-four of the 45 new messages belonged to the chain. Opening Maria's note first, Joan scanned to the bottom for the source of all this verbiage. The original message came from Marcus and was addressed solely to Kevin Dobbs. "Following up on our conversation of this morning, here are some more numbers/evidence regarding the good effects of the Bush tax cuts. If you look at the chart you'll see that growth for the past six months is 6.2% compared with Clinton's total average of 3.6%. The gentleman who

wrote this, Jerry Bowyer, has a book out (*The Bush Boom*), which is very smart on the subject. I can lend it to you if you're interested." A link to the *National Review Online* followed.

With trepidation, Joan moved on to Kevin's response: "You wanna compare Bush and Clinton? OK. Fine. Let's talk jobs." Here, Kevin had embedded a link to the political newsletter *CounterPunch*. "With Clinton the economy produced 18 million new jobs. Under Bush we've lost 2.7 million." Kevin had copied his response to Maria, who had added her own link and an exclamation-mark-filled exhortation to "Look what the administration has taken from the states! Look what it's taken from Social Security! Look what it's taken from our children's future!"

Maria had broadcast her response to the whole Denver office. With growing horror, Joan opened message after message, each with its own uncompromising viewpoint ("I used my tax cut check to buy that kayak everyone keeps borrowing. I don't hear anyone complaining about that!" "My daughter is in a state college. Do you have any idea how much her tuition went up this year?"). About half the messages included links to supporting evidence, which Joan assumed employees had tracked down on the Web during the five-plus hours the debate had raged. How many collective hours of employee time had this cascade consumed?

Drained, Joan stood up and walked toward the living room, yearning for whatever digital balm TiVo had assembled for her. She scooped up the remote, paused, then set it back down on the coffee table. Returning to her computer, she reopened the first e-mail and clicked on the link to the *National Review* article. Suddenly wide awake, she began to read.

When Politics Gets Personal

Every time Joan walked into Gretchen Pheen's office she thought of Mary Tyler Moore's sitcom apartment. A bright, flocked rug rested between two commodious armchairs. There were framed watercolors on the walls and a blue glass vase of pussy willow catkins on the desk.

Directly opposite the door hung a two-foot-high brass letter "G." On Monday morning, Joan sat gazing up at that "G" as Gretchen, the HR manager, talked.

Gretchen was explaining her concerns about Carla Pattel, a production supervisor and longtime employee. Carla had appeared in Gretchen's doorway at 6:30 on Friday evening, her eyes rimmed with red. After several false starts aborted by sobbing, she had managed to blurt out her complaint.

Carla's son was in the army, stationed near Baghdad. Her colleagues had been cautiously considerate throughout this difficult time, remembering to ask after the young soldier and otherwise avoiding all mention of war. But recently, Carla had said, people seemed to be less sensitive. In her presence, they would discuss the existence of WMDs, the link between Iraq and terrorism, and the balance between domestic and foreign priorities. Cars in the parking lot had begun to sprout bumper stickers. This morning she found herself between a "Regime Change 2004" and "Bush Lies Our Soldiers Die." "I was so upset by that one I got out of the car and started scraping at it with my keys," Carla had confessed to Gretchen.

The avalanche of e-mail on Friday had pushed her over the edge. "My stomach lurched every time Outlook pinged at me," Carla had told Gretchen. "I believe in this president, and so do a lot of people here. But some of those messages were so *angry*. Knowing now how people really feel...it's changed things. I don't even want to talk to them. I just want to hide in my office."

"I don't mean to sound callous," Joan said, after Gretchen had finished her story, "but don't you think Carla's being a little oversensitive? After all, she lives in the real world. It's not as though she can insulate herself from all unwelcome opinions."

"What worries me," said Gretchen, "is whether we can be accused of tolerating a hostile work environment."

Joan was startled. "I thought that was just a sexual harassment thing?"

"As I understand, it can be applied to other areas: race, disability, religion..."

maybe this too. I'm just starting to look into the matter. Here's the important thing, Joan," Gretchen went on. "Legal problems concern me a little, but people problems concern me a lot. Carla's a great employee and a great person. And who knows, maybe others feel this way too. I wouldn't want us to lose anybody over this."

"Neither would I," agreed Joan, as she struggled to extricate herself from the depths of her chair. "I'll need to think about what we should do."

"As will I," said Gretchen. "In the meantime, I'll try to park next to Carla. My bumper sticker says 'Boycott France.'"

Partners and Partisans

A few hours later, Joan sat at one of the outdoor picnic tables, enjoying the gentle interplay of warm air and cool breeze on her face. Before her lay the thick notebook she used to track the staff's workloads. She was busy balancing those loads when a shadow fell across the page. She looked up to see Marcus standing behind her.

The project manager brushed some potato chip crumbs from the bench and sat. "Sorry about that whole e-mail thing last week," he said, sounding more chagrined than apologetic. "I was only writing to Kevin. It got out of hand."

"Not your fault. Things are a little volatile around here these days."

"Anyway, maybe this will make it up to you." Marcus was one of the few men who routinely wore a suit in the office. Now he reached into his jacket pocket and withdrew two business cards, which he placed in front of Joan. She picked them up and studied them.

"Morris Kettle, Loadstar Trucking, and Kelly Carfax, Carfax Technologies," explained Marcus. "In my spare time I do some work—volunteer, of course—for Citizens for a Sound Economy, Dick Arney's group. I got friendly with Morris and Kelly there. So happens Morris isn't happy with his current marketing firm—Wintab, over in Boulder—and Kelly is thinking of doing her first national campaign. They have both expressed interest in what we have to offer."

Joan's eyes widened. "This is terrific, Marcus. You missed your calling; you should be in sales."

"Too shy," Marcus grinned and stood up. "You know, Joan, there's a fair number of us rubbing shoulders with the Denver business elite these days. I know Cyn has met some people working on that ballot initiative to raise taxes to fund the arts. Dominique's a trip leader for the Sierra Club. She's expecting a couple of bigish-wigs when they trek Powderhouse next week. Blake and I are CSE, and I think Douglas in accounting volunteers for Log Cabin Republicans. Great networking opportunities all. You might want to remind people of that."

Joan slipped the business cards into her notebook pocket. The breeze had given a last sigh and disappeared; the air was warmer now, but just as pleasant. For a moment, at least, her anxieties seemed to fall away. Gathering up her things, Joan walked with Marcus back toward the building.

Time to Cut Off Debate?

Clarion's Denver office occupied the top two floors of a 16-story office building. Whenever CEO Barney Krey was in town, he would commandeer the 15th floor conference room with its panoramic views of downtown and the mountains looming beyond. At the company's St. Louis headquarters, his office overlooked a speed trap. Barney told his Denver staff, "I prefer this kind of drama."

Barney had flown in late Tuesday night, but as Joan entered the conference room at 9 AM Wednesday she saw at once that he had been up-and-at-'em for several hours. The whiteboard was freshly covered with Rube Goldberg-esque schematics for something mysteriously labeled "The Virtual Press Tour." Dozens of folders lay strewn across the table. A stale-smelling sweat suit had been tossed on a chair, together with a damp towel. Joan counted five diet soda cans and seven Styrofoam coffee cups.

For the next two hours, CEO and general manager conducted a wide-ranging

conversation about everything from Clarion's new promotional products to new staff hires. Their agenda exhausted at last, Joan got ready to leave. "One more thing," said Barney, gesturing for her to stay seated. "You know I don't like to horn in on how you folks do things, so long as they get done. But from what I hear, this place is starting to feel like Sunday morning TV. Politics are disruptive and divisive and get in the way of teamwork, and we're nothing if we're not a team. I've always kept my opinions to myself, and it's served me well. No one here knows anything about my politics."

Joan permitted herself a small smile. "Actually, Barney, most employees in most companies would consider themselves remiss if they *didn't* know the big cheese's politics. Everyone here is aware you're a Bush supporter."

Barney sat back, looking surprised. "Really? Well, I certainly hope it doesn't make people feel they're under any pressure. I've never asked anyone in the company to contribute money or support a candidate. Sure, I've hosted a few fund-raisers, but the Clarion folks who've been involved are all true believers who approached me, volunteering to help..." Here the CEO reeled off the names of a few members of his inner circle. All had joined the company after Joan, and all but one were now in positions above hers. As she listened, her cheeks grew hot, and she crumpled a Styrofoam cup in her left hand.

"Naturally, you wouldn't want to be seen as stomping on anyone's civic-mindedness," Barney continued, not noticing Joan's stricken look. "But these issues are sensitive. When you don't know where to draw the line, maybe zero tolerance is the answer."

Fat drops of rain were beginning to spatter the windows. Barney stood and stretched. "Anyway, I leave it up to you," the CEO concluded as he headed out the door. "But I think you should consider setting boundaries."

Should Joan intervene in Clarion's political culture? • Four commentators offer expert advice.

Engaged citizens are more likely to be engaged employees, and people involved in causes outside of work feel more empowered and optimistic at work.

I wish more companies were as politically active as Clarion. Most employees care more about the latest office coup than the latest coup d'état. And that's a shame, because I believe that engaged citizens are more likely to be engaged employees and that people involved in causes outside of work feel more empowered and optimistic at work. Consequently, I think business leaders and managers have a responsibility not only to allow political dialogue but to nurture it.

I first experienced the galvanizing influence of office debate when I was a product manager at Citibank in the early 1990s. Our business trips often featured late dinners where conversation was purposely directed at political issues. The marketing director for our group would introduce some controversial subject—such as tax increases or education financing—and set us loose on it. Much as at Clarion, where the atmosphere motivated employees to follow the news, our dinners became a goad to self-education. Nobody showed up without informed opinions. There was no pressure to coalesce around a common belief; in fact, the director encouraged disagreement and individuality.

At Citibank, those informal interactions strengthened the group's ability to form and defend positions, increased our respect for one another, and helped us understand each other's critical thinking. And it was fun. We didn't feel like partisan opponents but rather like rival sports fans enjoying the thrill of the game. Compare that approach with CEO Barney Krey's proclaimed separation of church and state at Clarion. While intended to eliminate differences, that policy only divided people more—producing conspiracy theories and the perception of an old boys' network controlling decisions.

I adopted that Citibank manager's tactics as I moved on to smaller companies. At RLM, a public-relations firm of which I was president, I would challenge employees to meet

for drinks once a month to hash over some contentious national issue. We dubbed these gatherings "Pub & Politics." They forged connections between people of unlike backgrounds and made us stronger as a team.

Being in a similar industry, I sympathize with Joan Mungo's concerns about client sensitivities. But anyone in a service business knows that once you start pretending to be what the client wants rather than what you are, the business is as good as gone. I suppose Eliot Stotts might ask that Dominique Ferrers be taken off the AllTerrain account, but, more likely, he'll be thrilled to have someone with her skills on his team. That has certainly been our experience. When clients questioned RLM's political orientation, we told them: "You hire us for our communications skills, not our politics, so our personal positions are of little consequence." That said, we also worked hard to recruit clients from across the political spectrum. While our Washington, DC, office was largely liberal, we had quite a few Republican employees and clients in Los Angeles, and I encouraged the staff to pursue a contract with the NRA to help balance our work with a gun-control group.

My new company, Schlossberg:Flynn, has a reputation for listing slightly left. But as a business development and finance firm that works chiefly with small companies, we are also staunch capitalists. We tell clients and prospects that our employees may have strong views on political issues. But we make clear that we are in business to solve clients' problems, not promote employees' views. That should be Clarion's message as well.

Like it or not, for many people the workplace has become their only community. If we don't discuss politics and civic issues in the office, we may not discuss them at all. Clarion's newfound engagement has energized its staff and made it a rewarding place to work. Joan should do everything possible to keep it that way.



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Clarion is suffering more from traditional office politics than because it is a politically charged office. Internal politics – the type that generates conflict over favoritism and turf rather than domestic issues and world events – has been around for a long time. But with the ascendance of the language of rights, it has gained a new lease on life in the form of disputes over harassment and discrimination. In Britain and Europe, routine disagreements between employees have become politicized. Bullying has emerged as an all-purpose frame through which employees represent their cases.

That is happening at Clarion, where partisan debate sometimes excuses or masks pettier squabbles. The tension between Stuart Baize and Dominique Ferrers, for example, appears to be over political differences. But Stuart isn't motivated solely—or even chiefly—by personal conviction. In fact, he wants to get his hands on the AllTerrain account, and Dominique's undiplomatic letter to a newspaper provides the pretext for executing his

ion's newly engaged culture is divisive and may undermine the company's coherence. (Although Krey himself is not immune to internal politicking: Consider the professional advancement of his political fellow travelers.)

He is correct in the sense that any development that profoundly transforms office life will have unexpected consequences, both good and bad. E-mail exchanges and chats over coffee help consolidate a sense of common purpose and even forge an esprit de corps. But they also take up valuable time, which many executives will consider time wasted. And a changing office culture is by definition disruptive, which for some means risky and unpredictable.

Yet debate has produced considerable benefits for Clarion. The flourishing political culture encourages employees to join together in a common conversation. By all accounts, those discussions have had a stimulating influence on office life, endowing it with new meaning for individual workers. The speed with which political discussion took off at Clarion indicates that employees are hungry to interact and connect with one another on matters of substance. Construction of these new intracompany social networks is an opportunity for Clarion to establish a genuinely interactive work-based community. Such communities are an important asset for companies that understand the value of and seek to build employee loyalty and identification.

The activism of individual employees has also helped Clarion establish links with local businesses. For example, the politically engaged Marcus Lippman appears to meet a lot of people outside the office who are very useful to the company.

Of course, Joan Mungo cannot remain complacent. As general manager, she will need to set some limits and establish some guidelines. But she also must make sure that her actions don't undermine the new community forming around political debate. By encouraging that community to develop in a responsible direction, she may help Clarion's employees rise above internal politics, which is the true divider.

Compared with the atmosphere of mistrust fostered by office politics, the problems caused by employees' outward-oriented politics appear positively benign.

maneuver. Stuart would probably have tried to move in on Dominique's patch even if Clarion had remained a politics-free zone.

Similarly, notice that Gretchen Pheen, the HR manager, focuses on the company's exposure to accusations of creating a hostile work environment. The growth of litigation is one result of the proliferation of nasty, personality-driven politics and the failure of informal company systems to curtail it. In this case, Clarion's new externally directed political dialogue may risk igniting an already litigious climate.

Compared with the atmosphere of mistrust fostered by such inward-oriented office politics, the problems caused by employees' outward-oriented politics appear positively benign. CEO Barney Krey worries that Clar-

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That e-mail exchange—and the potential for more like it—may not endanger Clarion legally, but it does endanger productivity. Here Joan has legal latitude to crack down.



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Thanks to geography, Joan Mungo has some leeway managing Clarion's political ferment. Only in California, New York, and Washington, DC, is it illegal for private employers to discriminate because of political activity or affiliation. Some cities (such as Seattle; Lansing, Michigan; and Madison, Wisconsin) also bar discrimination by private employers on the basis of political orientation or ideology—but neither Denver nor St. Louis (the site of Clarion's headquarters) is among them. However, Colorado is one of two states that prohibit discrimination based on "lawful activity off the premises of the employer during nonworking hours." That means Joan must proceed with caution.

The thorniest legal problem is Dominique Ferrers. Joan isn't thinking of firing Dominique, but if she transfers her off the AllTerrain account, Dominique will likely see it as retaliation for writing the letter to the newspaper on her own time. In one case, a federal district court in Colorado interpreted the "lawful activity off the premises" statute as providing "a shield to employees who engage in activities that are personally distasteful to their employer, but...legal and unrelated to an employee's job duties." The court cited, as a hypothetical example, "members of Ross Perot's [then] new political party who are employed by a fervent Democrat."

That case involved an employee who had written a letter to the editor attacking the practices of his employer, Delta Airlines. The employee lost because the act violated his duty of loyalty to his employer—a recognized exception to the law. Dominique's letter, by contrast, says nothing critical about Clarion. If, as a result of her losing the account, Dominique's status or income suffers and she feels compelled to leave, she may claim "constructive discharge"—in other words, that working conditions became so intolerable that a reasonable person in the employee's position would have felt compelled to resign.

The constructive discharge issue also troubles Gretchen Pheen, who worries that a "hostile work environment" might drive Carla Pattel to resign and ultimately sue. In Carla's case, however, that's not much of a threat. Federal and state laws limit speech or conduct that creates a hostile work environment based on sex, race, age, religion, or disability—but not political expression. Even if political activity were included, the law requires that the objectionable conduct be "severe" or "pervasive." A few bumper stickers and a single e-mail exchange don't pose much risk of liability.

That e-mail exchange—and the potential for more like it—may not endanger Clarion legally, but it does endanger productivity. Here Joan has legal latitude to crack down. The employees used work time and Clarion's resources (computers, servers, and internal networks) to facilitate their debate, and the exchange took place during work hours. Most cases analyzing the rights of employees to communicate over company networks have favored employers. Clarion would be on even stronger ground if it had a policy permitting the company to take disciplinary action after informing employees about what kinds of communications are not permissible.

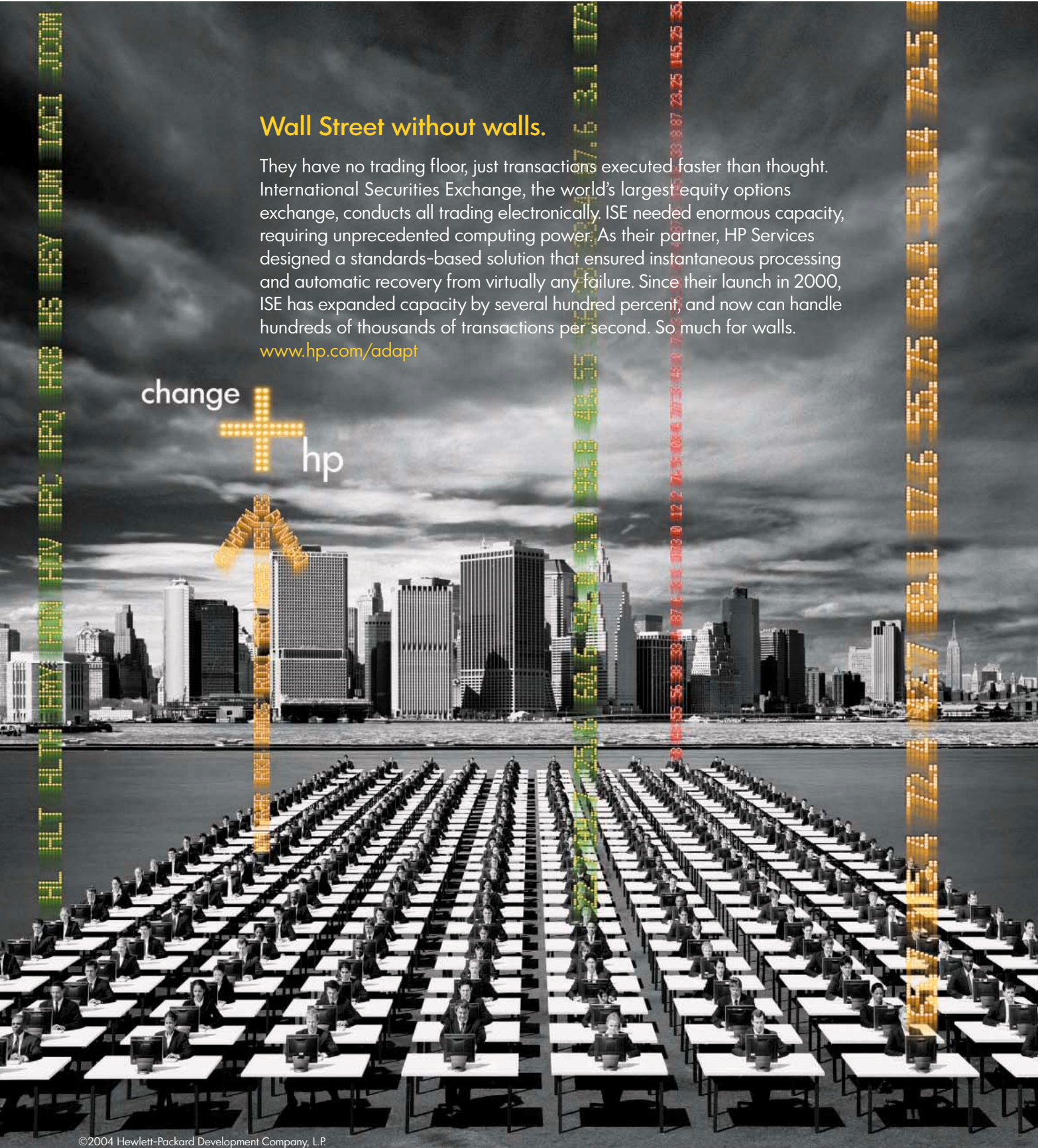
To lay the groundwork for protecting the company, Joan should publicly remind employees to respect each other and be aware of how their words affect their colleagues. She should also let Carla know privately that she is doing so for her benefit. (A company that takes "prompt remedial action" bolsters its defense in harassment suits.) She should establish an e-mail policy, strictly enforce it, and ask Barney Krey to set the example. She should leave the AllTerrain account where it is and defend Dominique's off-duty conduct to anyone who questions it. And if Barney—despite his assurances that she is in charge—questions her decisions, Joan should give him a tutorial in Colorado law.

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James E. Rogers is the chairman, president, and CEO of Cinergy, a diversified energy company based in Cincinnati.

Businesses today operate in a political environment where the stroke of a pen in Washington, DC, a state capital, or even a city hall can greatly affect their bottom lines. Politics matters, which is why astute companies have public-policy agendas and value politically informed and active employees. In fact, working to shape public policy should be a critical element of any company's risk management strategy.

Clarion appears to lack any formal corporate public-policy agenda; or if it has one, no one knows about it except the company's top leadership. As a result, employees' political activities are unfocused, occasionally destructive. Joan Mungo should urge the CEO to do two things: define and promote the company's positions on critical issues to staff and establish a code of business conduct and ethics to guide employees' choices about how best to express their opinions.

A code of conduct would, for example, require employees to distinguish between personal and company viewpoints when presenting them in public. Such a clear distinction might lessen the danger that an angry AllTerrain will pull its business in response to Dominique Ferrers's letter in the *Denver Post*.

With time set aside for debate, e-mail exchanges would probably lose their allure, and with it their ability to inflame tempers and drain resources.

It may not have occurred to Dominique—fired up as she was—that a client might have its own, countervailing interest in the subject. Such an oversight would not be surprising: Clarion managers appear to have done a very poor job of communicating the viewpoints and interests of the company to staff.

Companies that want to focus employees' energy and activism must first give them an appropriate target, by explaining both their own political positions and the political positions of their customers. Clarion's management could accomplish that goal by organizing ongoing presentations, programs, and

events where employees can learn about the company's clients and issues. Management should then do what it does best—market those offerings to staff. Going further, Joan and her team could provide forums for employees to meet with political leaders at all levels, listen to their views, and discuss the company's public-policy agenda. Those exchanges would facilitate healthy open discussion. Participants could air differences of opinion and philosophy and comment on company positions. Employees would get a sense of the big picture; that, in turn, would help them make informed judgments about their own political positions and how those positions affect the company's interests.

Organizing its own political activities would also give Clarion's management greater control over productivity issues. With time set aside specifically for discussion and debate among colleagues, endless e-mail exchanges would probably lose their allure, and with it their ability to inflame tempers and drain resources. Still, even within the parameters of organized activities, some subjects might well prove contentious (that is, after all, the nature of political dialogue). For that reason, Clarion should also put in place a diversity initiative that encourages employees to respect differences among themselves, including divergent political views.

Clarion's employees are engaged, and that is, by definition, a good thing. Instead of trying to rub out debate, management should creatively and proactively promote political discussion within the context of company concerns and relationships. Rather than discourage employees from making political statements, it should encourage them to consider how colleagues, customers, and others may react before they speak out or write.

Such informed consideration will result in a deeper understanding by employees of all of the company's stakeholders. And that deeper understanding will help Clarion do something it clearly is not doing now: act as a team, in the team's interests. ▢

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Presenteeism: At Work – But Out of It

by Paul Hemp

As companies struggle to rein in health care costs, most overlook what may be a **\$150 billion** problem: the nearly invisible drain on worker productivity caused by such common ailments as hay fever, headaches, and even heartburn.

FOR YEARS, Amy Farler, who designs transmission components for International Truck and Engine, suffered in silence. Once in a while, when an allergy-related sinus headache escalated into a full-blown migraine, she missed a day of work. But most of the time, she went to the office and quietly lived with the congestion and discomfort of her seasonal allergies. “Sometimes, it’s like you wouldn’t mind if your head rolled off your body,” says the 31-year-old engineer, who spends most of her day working with 3-D models on a computer screen. “You feel clogged up and hazy. The pressure makes you want to close your eyes. It’s hard to focus. You end up just muddling through.”

Woody Allen once said that 80% of success in life can be attributed to simply showing up. But a growing body of research indicates that—in the workplace, at least—this wry estimate may be

somewhat optimistic. Researchers say that *presenteeism*—the problem of workers’ being on the job but, because of illness or other medical conditions, not fully functioning—can cut individual productivity by one-third or more. In fact, presenteeism appears to be a much costlier problem than its productivity-reducing counterpart, absenteeism. And, unlike absenteeism, presenteeism isn’t always apparent: You know when someone doesn’t show up for work, but you often can’t tell when—or how much—illness or a medical condition is hindering someone’s performance. “Outwardly you look fine,” says Farler, who over the years tried numerous prescription and nonprescription medications for her allergies, with little success. “People don’t see how you feel.”

However, a handful of companies—including International Truck and Engine, Bank One (recently acquired by

JPMorgan Chase), Lockheed Martin, and Comerica – are recognizing the problem of presenteeism and trying to do something about it. That entails determining the prevalence of illnesses and medical problems that undermine job performance in the workforce, calculating the related productivity loss,

and able to concentrate better,” says Farler, who estimates that her productivity may have suffered by as much as 25% before she was correctly diagnosed.

Experiences like Farler’s raise some broad questions about today’s vigorous efforts to contain health care expenses. For example, in trying to reduce direct

generous view of worker attitudes serves as a backdrop to researchers’ continuing efforts to document their findings more conclusively.

Many of the medical problems that result in presenteeism are, by their nature, relatively benign. (After all, more serious illnesses frequently force people to stay home from work, often for extended periods.) So research on presenteeism focuses on such chronic or episodic ailments as seasonal allergies, asthma, migraines and other kinds of headaches, back pain, arthritis, gastrointestinal disorders, and depression. Progressive conditions like heart disease or cancer, which require expensive treatments and tend to strike people later in life, generate the majority of companies’ direct health-related costs – that is, the premiums a company pays to an insurer or, if the company is self-insured, the claims paid for medical care and drugs. But the illnesses people take with them to work, even though they incur far lower direct costs, usually account for a greater loss in productivity because they are so prevalent, so often go untreated, and typically occur during peak working years. Those indirect costs have long been largely invisible to employers.

Illness affects both the quantity of work (people might work more slowly than usual, for instance, or have to repeat tasks) and the quality (they might make more – or more serious – mistakes). Untreated allergies like Amy Farler’s can impede concentration. The discomfort of gastrointestinal disorders – common but seldom-talked-about ailments such as irritable bowel syndrome and gastroesophageal reflux disease (also known as GERD, acid reflux disease, or, somewhat more prosaically, heartburn) – is a persistent distraction. Depression causes, among other things, fatigue and irritability, which hinder people’s ability to work together. Arthritis makes manual labor more difficult.

Clearly, different conditions have different effects on different jobs. While depression may not seriously impair an auto mechanic’s performance, lower-back pain might. An aching back may not be a big problem for an insurance

Unlike absenteeism, presenteeism isn’t always apparent. You know when someone doesn’t show up for work, but you often can’t tell when – or how much – illness or a medical condition hinders someone’s performance.

and combating that loss in cost-effective ways. This is a new area of study, so questions remain around a host of issues, including the central one: the exact degree to which various illnesses reduce productivity. But researchers are discovering increasingly reliable ways to measure this and are concluding that presenteeism costs companies billions of dollars a year. Emerging evidence suggests that relatively small investments in screening, treatment, and education can reap substantial productivity gains.

For example, International Truck and Engine, as part of a study of how allergies affect the company’s workforce, offered interested employees free consultations with an allergy specialist at its truck development and technology center in Fort Wayne, Indiana, where Amy Farler works. After her meeting, Farler decided to get a complete evaluation from another allergist, who ultimately determined that she had in the past been misdiagnosed: She was allergic not only to seasonal ragweed pollen but also to dust mites, which was why her symptoms persisted throughout the year. The doctor prescribed a combination of drugs that significantly improved her condition. Although she still has some problems during peak hay fever season, most of the time she feels pretty good. “I’m definitely a lot more alert

costs by trimming employees’ benefits, could companies be achieving false savings that are offset by the indirect cost of reduced productivity? Conversely, could targeted investments in the treatment of certain common illnesses more than pay for themselves through productivity gains?

Illnesses You Take to Work

Presenteeism, as defined by researchers, isn’t about malingering (pretending to be ill to avoid work duties) or goofing off on the job (surfing the Internet, say, when you should be preparing that report). The term – which has gained currency despite some academics’ uneasiness with its somewhat catchy feel – refers to productivity loss resulting from real health problems. Underlying the research on presenteeism is the assumption that employees do not take their jobs lightly, that most of them need and want to continue working if they can.

“We’re talking about people hanging in there when they get sick and trying to figure out ways to carry on despite their symptoms,” says Debra Lerner, a professor at Tufts University School of Medicine in Boston, who notes that presenteeism may be more common in tough economic times, when people are afraid of losing their jobs. “If every employee stayed home each time a chronic condition flared up, work would never get done.” That some managers hold a less

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salesperson, but depression is likely to be. The result in either case: a significant sapping of worker productivity.

Costs That Can't Be Seen

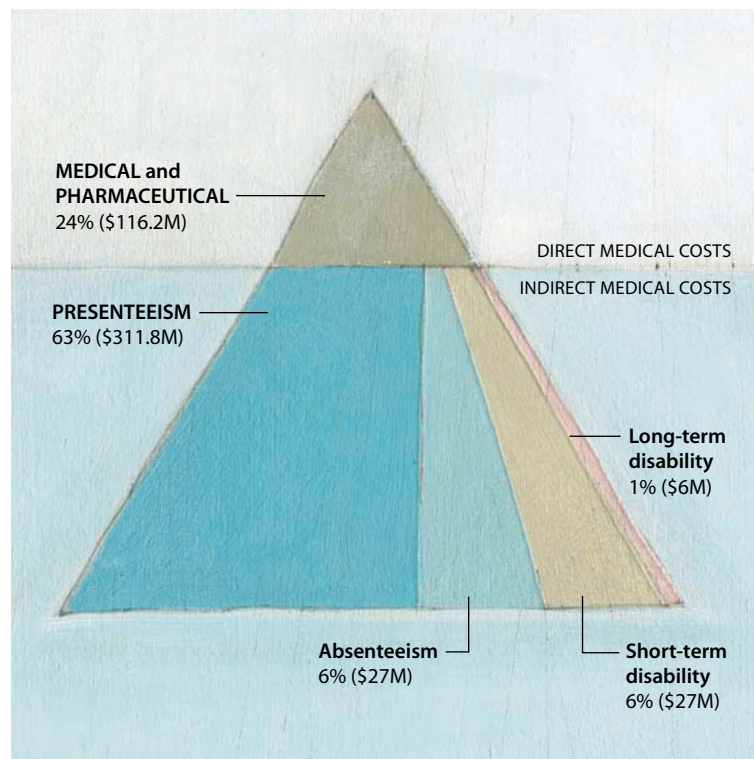
Well-publicized studies in recent years have estimated the nationwide costs of several common ailments in the U.S. workplace. Two articles in the *Journal of the American Medical Association* last year reported that depression set U.S. employers back some \$35 billion a year in reduced performance at work and that pain conditions such as arthritis, headaches, and back problems cost nearly \$47 billion. "Pain, no matter what the cause, will always translate into lost time at work," says the studies' lead author, Walter F. ("Buzz") Stewart, a director of the Center for Health Research & Rural Advocacy at Geisinger Health System in Danville, Pennsylvania.

Researchers have also tried to quantify the impact of disease in general on workplace productivity. Using the same methodology employed to gauge the costs of depression and pain – a year-long telephone survey of 29,000 working adults, dubbed the American Productivity Audit—Stewart's research team calculated the total cost of presenteeism in the United States to be more than \$150 billion per year. Furthermore, most studies confirm that presenteeism is far more costly than illness-related absenteeism or disability. The two *Journal of the American Medical Association* studies, for example, found that the on-the-job productivity loss resulting from depression and pain was roughly three times greater than the absence-related productivity loss attributed to these conditions. That is, less time was actually lost from people staying home than from them showing up but not performing at the top of their game.

What may be more significant—but is also controversial—is that presenteeism appears to cost companies substantially more than they spend directly on medical treatment and drugs. (It's important to note that many presenteeism studies, though conducted by academics or health management consultants, are proposed and funded by pharmaceuti-

The Hidden Costs of Presenteeism

Many employers don't realize it, but presenteeism—on-the-job productivity loss that's illness related—may be far more expensive for companies than other health-related costs. Bank One concluded this a few years ago, when the company did a breakdown of its medical costs. In the diagram below, medical and pharmaceutical expenses are payments made on employees' claims for medical treatment and prescription drugs. Disability and absenteeism expenses are the compensation paid when employees are away from work. Presenteeism expenses, estimates based on employees' salaries, are the dollars lost to illness-related reductions in productivity.



Source: Bank One

Figures are based on annual data for 2000. Workers' compensation accounted for less than 1% of indirect medical costs.

cal companies hoping to show that certain medications are worth paying for because they will increase worker productivity by ameliorating symptoms of illness.) Typically, studies show that presenteeism costs employers two to three times more than direct medical care, which is paid for by companies in the form of insurance premiums or employee claims.

But such findings, while striking, are academic until a company takes a close look at the effects of illness on the pro-

ductivity of its own workforce. Bank One, for instance, has calculated its direct and indirect health costs and found that the direct spending represents only a fraction of the company's total costs. (See the exhibit "The Hidden Costs of Presenteeism.") Comerica, another large bank, analyzed the impact of irritable bowel syndrome, an often-undiagnosed ailment common among women, on presenteeism. The company discovered that at least 10% of its predominantly female workforce of 11,800 suffered from

the condition, whose symptoms include painful abdominal cramps. The study – funded by Novartis, which makes Zelnorm, a drug used to treat IBS – found that flare-ups reduced workers' on-the-job productivity by approximately 20% across a wide range of clerical and executive jobs. "People show up for work, but with the pain – not to mention frequent trips to the bathroom – they're just not very productive," says David Groves, vice president for corporate health management. Other companies' studies have assessed the impact of individual illnesses ranging from arthritis to allergies, often because they appear to be a problem in a particular workforce. [For a look at how seasonal allergies have impaired productivity at a number of companies, see the sidebar "The Stealth (*ah...ah...*) Enemy (*ahh...*) of Productivity (*...chooooo!*)"]

Some companies are trying to get a handle on the full array of illnesses affecting worker productivity. Lockheed Martin did a pilot study, involving 1,600 of its 25,000 workers, that examined the effects of more than two dozen chronic medical problems. Using a detailed questionnaire to assess how different illnesses affected workers' physical and mental ability to do their jobs, the company tentatively identified how much each of the various conditions reduced productivity. (For a tabulation of the productivity costs of several health problems studied at Lockheed, see the exhibit "A Presenteeism Report Card.")

An Emerging Field

Productivity, always an elusive concept, is particularly difficult to measure in today's postmanufacturing, widget-sparse economy, in which so little of what we produce can be counted. So researchers have turned to questionnaires that ask employees whether they suffer from a medical problem and, if so, how much it impairs their performance. At least a half-dozen assessment tools are currently in use, each looking at reduced productivity from a slightly different perspective. One, developed by Buzz Stewart and used in the American Productivity Audit, asks workers how

A Presenteeism Report Card

Lockheed Martin commissioned a pilot study in 2002 to assess the impact of 28 medical conditions—some serious, some relatively benign—on workers' productivity. Researchers from Tufts–New England Medical Center in Boston found that even employees with less severe conditions had impaired on-the-job performance, or presenteeism. The table below lists several of the ailments studied; for each one, it includes estimates of prevalence, productivity loss, and annual cost to the company in lost productivity (this figure was based on the average Lockheed salary, roughly \$45,000). Together, the 28 conditions set the company back approximately \$34 million a year.

Condition	Prevalence	Average productivity loss	Aggregate annual loss
Migraine	12.0%	4.9%	\$434,385
Arthritis	19.7	5.9	865,530
Chronic lower-back pain (without leg pain)	21.3	5.5	858,825
Allergies or sinus trouble	59.8	4.1	1,809,945
Asthma	6.8	5.2	259,740
GERD (acid reflux disease)	15.2	5.2	582,660
Dermatitis or other skin condition	16.1	5.2	610,740
Flu in the past two weeks	17.5	4.7	607,005
Depression	13.9	7.6	786,600

Source: Debra Lerner, William H. Rogers, and Hong Chang, at Tufts–New England Medical Center

much productive work time they think they've lost because of medical problems. Another, developed by Ronald Kessler, a professor at Harvard Medical School, asks workers about their overall performance; it has been adopted by the World Health Organization and will also be used early next year in two large regional studies sponsored by business organizations in the midwestern and southeastern United States. A third, developed by Debra Lerner at Tufts, looks at several ways an illness can hurt an employee's ability to function and how the combination will affect different jobs; it is used by a variety of academic researchers, pharmaceutical companies,

and employers—including Lockheed, in the company's pilot study.

These and other research approaches have yielded quite different estimates of on-the-job productivity loss. According to a recent review of the research, such estimates range from less than 20% of a company's total health-related costs to more than 60%.¹ Without a standard tool for measurement, "there is a lot of confusion about what we're even measuring," concedes Stewart. There are other soft spots in the research. For example, a relatively small decline in one person's performance may have a ripple effect on, say, an entire team that falls behind schedule because the ailing

member has to skip a meeting. And researchers continue to wrestle with such challenges as measuring the relative effects of individual ailments on productivity for workers who suffer from more than one medical problem.

Many executives—and even some academics in the field—are wary of using surveys to gather data on presenteeism and suspicious of the current substantial estimates of presenteeism's costs. The skeptics include CFOs and benefits administrators, who are accustomed to citing, down to the penny, the amount a company spends on medical and pharmaceutical benefits. "There are naysayers," admits Sean Sullivan, president of the Institute for Health and Productivity Management, an organization of large employers, health care providers, pharmaceutical companies, and others interested in the relationship between employee health and business results. "They say, 'Show me the hard data.' But in the modern economy, we're simply going to run out of hard data."

Validating the Findings

Despite the skepticism—and even though the study of presenteeism is still young and the methods used to measure productivity loss are continually being reassessed—there have been some recent successes in firming up the research. These involve the validation of self-reported employee information, the kind of data most commonly used to gauge presenteeism. For example, workers' estimates of productivity loss drawn from the Stewart, Kessler, and Lerner questionnaires have been found to correlate with company-generated productivity data, including supervisor ratings and objective measures of employees' work output. A study involving 10,000 workers at International Truck and Engine focused on the possibility that surveyed employees might be less than candid about their health and productivity. But the study found that employees' reports correlated with past instances of such verifiable productivity problems as absenteeism and accident-related disabil-

ity—and with subsequent ones, which the employees presumably wouldn't have foreseen when they responded to the questionnaire.

Some of the strongest evidence of a link between self-reported presenteeism and actual productivity loss comes from several studies involving credit card call center employees at Bank One. There are a number of objective measures of a service representative's productivity, including the amount of time spent on each call, the amount of time between calls (when the employee is doing paperwork), and the amount of time the person is logged off the system. A study the company conducted in the late 1990s showed a relationship between workers with certain known illnesses (identified from earlier disability claims) and lower productivity scores. A more recent study, by academic researchers, compared the results from a presenteeism questionnaire with objective measures of call center workers' productivity. The employees' self-reports

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The Stealth (*ah...ah...*) Enemy (*ahh...*) of Productivity (...*chooooo!*)

It's a medical condition that doesn't show up on most employers' health care radar screens because it doesn't generate much in the way of claims data. Sufferers often take nonreimbursable, over-the-counter medications. Many don't seek outpatient medical treatment. Hardly any get admitted to a hospital for the ailment. Most significant, few stay home from work when it hits them.

Yet seasonal allergic rhinitis, colloquially known as hay fever, is generally considered by researchers to be a serious cause of presenteeism—the decline in on-the-job productivity attributable to workers' illnesses or medical conditions. Seasonal allergies have a large impact on a workforce's productivity not because they severely impair any one individual's performance but because they are so prevalent. Although estimates vary, the condition is thought to affect roughly 25% of the U.S. population during the spring and fall pollen seasons.

The negative impact of allergy symptoms—itchy nose, sneezing, congestion—on employees' performance has been documented in a variety of studies. In one, involving 630 service representatives at a Bank One call center in Elgin,

Illinois, allergy-related presenteeism was measured with such objective data as the amount of time workers spent on each call. During the peak ragweed pollen season, the allergy sufferers' productivity fell 7% below the productivity of coworkers without allergies; when ragweed wasn't posing a problem, the two groups' productivity levels were about the same. (See the exhibit "Pollen Count Up, Productivity Down.") "People don't have to be out sick for their work output to drop," says Wayne Burton, MD, who, as senior vice president and corporate medical director at Bank One, led the research. "Just having a runny nose can have an effect on productivity." In another study, involving more than 10,000 International Truck and Engine workers at six sites in the midwestern United States, self-reported productivity fell progressively on a number of fronts as the severity of allergy symptoms reported by workers increased. (See the exhibit "The Worse the Symptoms, the Greater the Loss.")

The prevalence of seasonal allergies can translate into a substantial aggregate loss in productivity. In a pilot study of the effect that 28 medical conditions had on presenteeism at Lockheed Martin, the

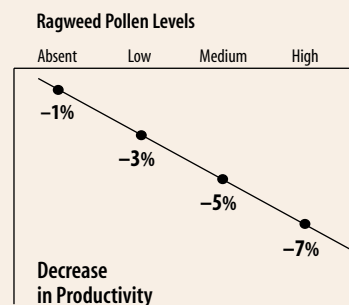
cost of allergies and sinus trouble was estimated to total \$1.8 million across a workforce of 25,000. "It's a problem that people often don't think about," says Pamela Thomas, MD, the company's director of wellness and health. "It was an eye opener for me."

One focus of allergy research is determining how medication can alleviate the problem. In the Bank One study, employees with allergies who reported using no medication were 10% less productive than coworkers without allergies, while those using medications were only 3% less productive. In most cases, nonsedating antihistamines are considered the medication of choice. Although relatively expensive and not effective for all allergy sufferers, so-called NSAs generally represent an advance over first-generation antihistamines, which can make people drowsy and impair cognitive and motor functions—and thus actually reduce productivity. (Both the Bank One and International Truck and Engine studies were funded by Schering-Plough, the maker of Claritin, a nonsedating allergy medication that became available over the counter in 2002.)

Researchers see potential to improve productivity by educating workers about appropriate medications and getting them to take the drugs that their doctors prescribe or recommend. The Bank One study found that nearly one-quarter of allergy sufferers didn't take any kind of allergy medication. It also concluded that covering the cost of nonsedating antihistamines for allergy sufferers (roughly \$18 a week, when drugs such as Claritin were sold by prescription) would be worthwhile, in light of the resulting gains in productivity (roughly \$36 a week, based on call center employees' wages and benefits, which averaged \$520 a week).

Pollen Count Up, Productivity Down

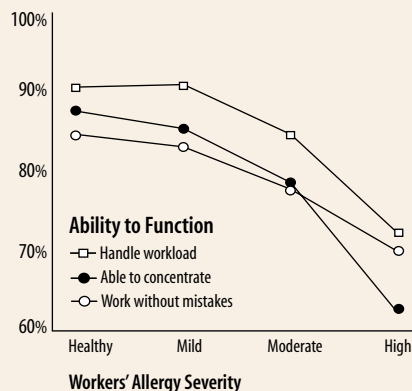
The effect of ragweed pollen levels on Bank One call center workers with allergies



Source: Bank One

The Worse the Symptoms, the Greater the Loss

The relationship between allergy severity and worker functionality at International Truck and Engine



Source: International Truck and Engine

of diminished productivity because of health problems correlated strongly with the objective data. “We’re getting to the point where, if objective data aren’t available, which they usually aren’t, we have a pretty good way to calculate the relationship between illness and on-the-job productivity,” says Wayne N. Burton, MD, longtime senior vice president and corporate medical director at Bank One and, since the company’s acquisition, medical director at JPMorgan Chase.

Ronald Kessler, the researcher at Harvard, notes that companies regularly make important business decisions based on subjective information, such as 360-degree performance evaluations and survey data that can be colored by respondents’ bias or lack of candor. What’s important, he says, is “not 100% accuracy but consistency” in the results over time.

Reducing Presenteeism

Whatever the shortcomings of current measurement tools and research, most people agree that presenteeism represents a problem for employers: When people don’t feel good, they simply don’t do their best work.

It’s one thing to show that there’s a problem, though, and another to demonstrate that there’s something you can do about it – and, if something *can* be done, that the benefits will justify the investment. A central aim of presenteeism research is to identify cost-effective measures a company can take to recover some, if not all, of the on-the-job productivity lost to employee illness.

The first step, clearly, is making your managers – and yourself – aware of the problem. Buzz Stewart recalls doing research in the late 1990s, when he was a professor of public health at Johns Hopkins University, on the impact of migraines on productivity. He was initially skeptical about the magnitude of his own findings. Then people at the university started telling him about how migraines affected their work. The big surprise, though, came several years later at a party, where he was chatting with the migraine study’s project man-

ager. She told him that about twice a month, she would close her office door as soon as she got to work, turn off the lights, and put her head on her desk. The problem: migraine headaches, of course. “Here I was, a ‘national expert’ on the subject,” he says, “and I wasn’t even aware of what was going on with my own staff.”

The next step involves getting to know the particular health issues facing your employees. This might entail a formal study, but to begin with, you could simply look at your workforce with health issues in mind. Lerner, at Tufts University, puts it this way: “An employer might say, ‘We’re a company with a workforce of mostly women, and our profitability depends on excellent customer service. Women are more likely than men to suffer from depression, and depression can affect customer relations. So maybe we should be doing something about this.’”

Educating employees is also crucial. You may want to set up programs to en-

sure that illnesses aren’t going undiagnosed because employees don’t realize they have a problem or – as in Amy Farler’s case – that illnesses aren’t being misdiagnosed. Comerica’s study of irritable bowel syndrome revealed that some employees had for years unsuccessfully sought help from as many as five or six doctors, who incorrectly diagnosed the condition; in a misguided effort to ease their pain, many workers had even undergone an exploratory appendectomy, hysterectomy, or other type of surgery.

It’s also helpful to teach employees how to better manage their illnesses. A recent education program at Lockheed Martin for arthritis sufferers gave explanations of treatment options and advice on making physician visits more productive. Comerica sponsored a series of hour-long Lunch and Learn sessions led by a gastroenterologist, which focused on things employees can do, like changing their diet and reducing stress, to relieve the symptoms of irritable bowel syndrome. Such programs usually



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emphasize the importance of regularly taking one's medications.

These steps seem simple, but the challenge of improving health education is far from trivial, as findings from the International Truck and Engine allergy study highlight. The company had augmented its traditional ways of relaying information to employees (newsletters, brochures, and bulletin board displays) with Web pages and on-site consultations with allergists. But a follow-up study revealed that the interventions hadn't boosted the relatively small proportion of allergy sufferers – about 25% – who took the new generation of nonседating medications. "One-shot education isn't going to be effective," says consultant Harris Allen, who led the research with William Bunn, MD, vice president of health, safety, and productivity at the company. "Even when potential benefits take the form of such low-hanging fruit as getting people to switch to a more effective medication, you need to overcome such motivational

Rooting Out the Problem

If productivity suffers when employees come to work with chronic illnesses or medical conditions, why not try to avoid the predicament of presenteeism altogether by screening potential hires for even relatively minor chronic health problems? Well, for one thing, such screening may well be illegal: So long as a condition is recurring, it is probably covered by the Americans with Disabilities Act, according to Mark Kelman, an expert on discrimination law at Stanford Law School. For another, you may find yourself drastically reducing the size of your talent pool. "You wouldn't say, 'I won't hire people who get the flu,'" comments Ronald Kessler, a professor at Harvard Medical School. "Similarly, it wouldn't make much sense to say, 'I won't hire the 25% of people who have seasonal allergies.'"

In fact, addressing the problem after people are on the job by offering them treatment may be more effective than trying to preempt it before they are hired. Still, employees' concerns about disclosing chronic medical conditions can hinder your efforts to assess and respond to presenteeism. Employees may hesitate to participate in a presenteeism survey, even when assured that it will be administered by a third party and, therefore, will be confidential. To overcome this sort of reluctance, employers typically offer an incentive – a company T-shirt, say, or the chance to participate in a cash raffle. But the strongest incentive, according to researchers, is the belief among employees that your company cares about their well-being, a feeling fostered by high-profile wellness and employee assistance programs.



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barriers as a reluctance to try something new or simple inertia.”

Spending to Save

Ultimately, improving productivity by improving employees’ health takes more than relatively low-cost education programs. It requires paying for new or better medical treatment, whether medication for allergies, counseling for depression, or tests to determine the cause of chronic headaches. Certain medications – for example, those used to treat allergies, migraines, asthma, and depression – have been found to significantly improve productivity, according to a survey of recent research on the subject.²

So far, though, there have been only a few studies showing that productivity gains completely offset the direct cost of providing the medications. One such study looked at the effect of allergies on Bank One’s call center service representatives and concluded that productivity improvements would indeed be

more than worth the cost of providing the allergy medications. Even the more general findings – that productivity increases when workers with health problems take appropriate medications – suggest that a company’s pharmacy costs should be viewed at least in part as an

Researchers have found that less time is lost from people staying home than from them showing up but not performing at full capacity.

investment in workforce productivity. Take the case of Pitney-Bowes. In 2001, with the aim of cutting health care costs, the office technology company sharply reduced employees’ co-payments for diabetes and asthma drugs. Subsequently, the direct costs of treating patients with those diseases fell by more than 10%,

presumably because the employees took the more affordable drugs regularly. A likely additional benefit: reduced absenteeism and presenteeism. Conversely, a study by researchers from Harvard Medical School and pharmacy benefits manager Medco Health Solutions, published last December in the *New England Journal of Medicine*, found that patients faced with a steep increase in their co-payments may stop taking necessary medications – a problem that, through increased absenteeism or presenteeism, could wipe out a company’s savings in direct medical costs.

Hints such as these about the potential cost-effectiveness of investments in employee health are driving further research. The two forthcoming studies of companies in the Midwest and the Southeast, each involving several dozen organizations, will try to identify economic moves companies might make to stem health-related productivity losses. Another study, funded by the National Institute of Mental Health and involving



mouth. More motor.

100,000 workers at a number of companies, including American Airlines and Northeast Utilities, is looking at whether depression-related presenteeism can be reduced cost-effectively through screening and outreach programs, access to inexpensive medication, and individual case management.

The poster child for a positive return on such investments is the flu shot. Numerous studies have shown that the cost of offering free shots is far outweighed by the savings realized through reductions in both absenteeism and presenteeism. There is also strong evidence that well-designed employee assistance programs (which offer counseling services for employees and their families), health risk assessments (which gather information from workers on conditions, such as high blood pressure, that may cause future health problems), and wellness programs (which promote healthy practices such as exercising and following a nutritious diet) more than pay for themselves by lowering companies' direct and indirect medical costs.

At the heart of programs like these is the belief that healthy employees are an asset meriting investment—that you may see a greater improvement in efficiency if you treat workers' asthma than if you install a new phone system.

Piece of a Larger Puzzle

Cost or investment? It's the question that underlies a slew of current research on the broad subject of "human capital." Just as the expense of training is seen by many as an investment in a skilled workforce, the expense of medical care is viewed as an investment in a healthy workforce—one whose productivity isn't impaired by relatively minor but common medical problems. In both cases, improved business results are anticipated.

"Better management of employee health can lead to improved productivity, which can create a competitive business advantage," says Sean Sullivan of the Institute for Health and Productivity Management. In fact, he adds, investments to reduce presenteeism, because they are so rare, offer greater

opportunities for getting ahead of the competition than investments in traditional areas such as training.

Standing in the way of these efforts, according to numerous researchers studying presenteeism, is the "benefits mentality" of many whose job it is to monitor and control corporate health care expenses. From this perspective, employees benefit from what the company spends on them rather than the company benefiting from what it invests in employees. (For a radical version of this view, see the sidebar "Rooting Out the Problem.")

More than two centuries ago, Adam Smith noted in his *Wealth of Nations* that workers are less likely to work productively "when they are frequently sick than when they are generally in

good health....[Sickness] cannot fail to diminish the produce of their industry." Smith's words ring just as true today, as researchers attempt to document in detail how this commonsense notion plays out in companies and what managers can do in response. 

1. See Ron Z. Goetzel, Stacey R. Long, Ronald J. Ozminkowski, Kevin Hawkins, Shaohung Wang, and Wendy Lynch, "Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers," *Journal of Occupational and Environmental Medicine*, April 2004.

2. See Wayne N. Burton, Alan Morrison, and Albert I. Wertheimer, "Pharmaceuticals and Worker Productivity Loss: A Critical Review of the Literature," *Journal of Occupational and Environmental Medicine*, June 2003.

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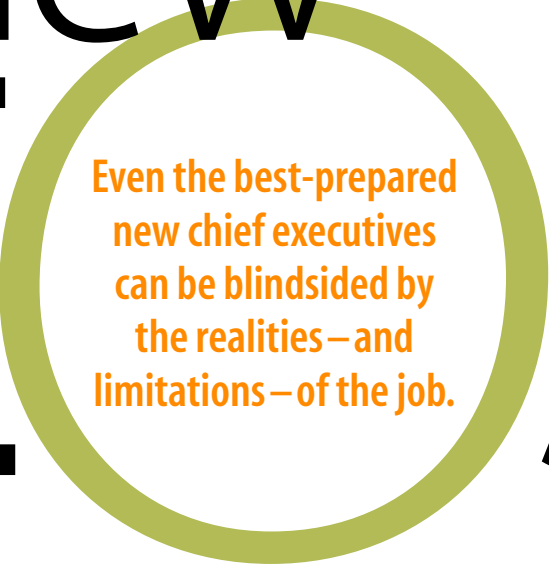
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Seven Surprises for New CEOs



by Michael E. Porter,
Jay W. Lorsch, and
Nitin Nohria

BEARING FULL RESPONSIBILITY for a company's success or failure, but being unable to control most of what will determine it. Having more authority than anyone else in the organization, but being unable to wield it without unhappy consequences. Sound like a tough job? It is—ask a CEO. Surprised by the description? So are CEOs who are new to the role. Just when an executive feels he has reached the pinnacle of his career, capturing *the* coveted goal for which he has so long been striving, he begins to realize that the CEO's job is different and more complicated than he imagined.

Some of the surprises for new CEOs arise from time and knowledge limitations—there is so much to do in complex new areas, with imperfect information and never enough time. Others stem from unexpected and unfamiliar new roles and altered professional relationships. Still others crop up because of the paradox that the more power you have, the harder it is to use. While several of the

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challenges may appear familiar, we have discovered that nothing in a leader's background, even running a large business within his company, fully prepares him to be CEO.

Through our work with new chief executives of major companies, we have found seven surprises to be the most common. (See the sidebar "Learning the Ropes.") How well and how quickly new CEOs understand, accept, and confront them will have a lot to do with the executives' eventual success or failure. The seven surprises highlight realities about the nature of leadership that are important not just for CEOs but for executives at any level and in any size organization.

Surprise One:

You Can't Run the Company

Before becoming CEO, most executives are responsible for a major business or have been COO. They are skilled at running businesses and relish the opportunity to run an entire organization. As new CEOs discover pretty quickly, however, running the business is but a small part of the job. On the second day of our New CEO Workshop at Harvard Business School, we go around the room and ask participants to describe what the job feels like to them. At a recent session, the CEO of a large midwestern manufacturer – an executive whose practiced, confident air bespoke decades of experience – revealed just how unsure he felt as he took his first steps on this new ground:

Imagine serving the same company for 37 years. It is the only employer you have ever known, and this fact intensifies the tremendous loyalty you feel for the firm and the camaraderie you share with your colleagues. Your appointment to CEO was one of the proudest moments of your life. You have been training to run the business for your whole career, you think, and you are really looking forward to doing so.

Now fast-forward a few months. Your calendar is booked solid with analyst meetings, business media interviews (which take ages to prepare for, since you never know where the shots will come from), and sessions in Washington (where you will attempt to explain to politicians the crucial and intricate details of your industry). You have also recently been elected to an outside directorship or two, and the charities that you have long supported are more eager than ever for you to join their boards and raise funds on their behalf. No one will accept a substitute – it has to be you.

Not only do you have external pressures tugging you away from day-to-day business operations; the volume of internal demands is enormous. Before you became CEO, you prided yourself on visiting every unit in your region, you got to know the employees, you spoke directly with customers – you had your hands right on the pulse of the business. Since you have become CEO, you have not been able to do any of these things even for your old region – never mind the rest. You cannot shake the feeling that you have lost touch with the day-to-day workings of your company. To make matters worse, the unavoidable gaps in your own expertise loom larger than ever.

This type of response is typical; a new CEO's comfort and familiarity with internal operations quickly recede as demands on the executive mount. The sheer volume and intensity of external demands take many by surprise. Almost every new CEO struggles to manage the time drain of attending to shareholders, analysts, board members, industry groups, politicians, and other constituencies. CEOs hired from outside struggle to learn how their new company operates, but those promoted from within work equally hard to separate themselves from operations and learn the terrain of their outside constituencies. Some have told us quite frankly that they feel a sense of loss because they're no longer as close to the business as they once were. One participant in the New CEO Workshop who had come up through the ranks at his company told us that he felt as if he were starting all over again—he had to learn new management tools and build new relationships while reframing old ones. Workshop participants complete a forced-rank survey that asks how prepared they feel for their new responsibilities on a number of dimensions, such as dealing with the stock market, working with their board of directors, operating at the center of public scrutiny, building a senior management team, or being the company's chief spokesperson. It is clear from their responses that CEOs are apprehensive about, as one put it, managing the dual roles of Mr. Inside and Mr. Outside.

As the CEO learns how demanding it is to attend to the company's outside constituencies, he also discovers, often to his shock, that he has to let go of a lot of responsibility – not just for operating the company but even for knowing what's going on in it. The CEO can't monitor everyone. It's simply not possible for any one person to oversee every facet of a large company, even if he were

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willing to put in a 100-hour week. The new CEO may expect this to be true as he begins, but it still feels strange not to know what subordinates are up to, and many executives experience the change as a loss of control. One workshop participant recalled that he was stunned by the realization that he would have to rely on others in areas like operations, where he had previously thrived, and would have to master aspects of the company such as investor relations and regulatory affairs, where he had little experience. To be sure, the new CEO has the final say in hiring and firing, promotions, and compensation, but many of those decisions are, by necessity, in the hands of people closer to operations. Indeed, CEOs often end up knowing less about the operational details of their companies than they did in their previous positions.

While the CEO is responsible for the successful operation of the enterprise, then, he can no longer be personally involved in all the decisions needed to run a large, complex organization. The CEO's greatest influence shifts from direct to indirect means – articulating and communicating a clear, easily understood strategy; institutionalizing rigorous structures and processes to guide, inform, and reward; and setting values and tone. Equally important is selecting and managing the right senior management team to share the burden of running the company.

Surprise Two:

Giving Orders Is Very Costly

The CEO is undoubtedly the most powerful person in any organization. Yet any CEO who tries to use this power to unilaterally issue orders or summarily reject proposals that have come up through the organization will pay a stiff price. Giving orders can trigger resentment and defensiveness in colleagues and subordinates. Second-guessing a senior manager can demoralize and demotivate not only that person but others around him, while eroding his authority and confidence. What's more, the need to overrule a proposal indicates that the strategic planning and other processes in place may be either inappropriate or insufficient. No proposal should reach the CEO for final approval unless he can ratify it with enthusiasm. Before then, everyone involved with the matter should have raised and resolved any potential deal breakers, bringing the CEO into the discussion only at strategically significant moments to obtain feedback and support. Ironically, by exercising his power to give orders, the CEO actually reduces his real power, saps his energy and his organization's, and slows down progress.

When CEOs wield direct power, they must do so very selectively and deliberately—and never without a broader plan of action in mind. Usually, power is best used indirectly, through the disciplined processes mentioned above (articulating strategy and so on). Together with tone and style, such processes enable the CEO to make effective decisions consistent with where he wants the company to go.

Learning the Ropes

The New CEO Workshop at Harvard Business School is open only to newly appointed CEOs of companies with annual revenues of \$1 billion or more. In keeping with the mission of HBS—to educate leaders who make a difference in the world—we introduced this workshop several years ago to address the distinctive challenges facing first-time chief executives in large, complex enterprises. We personally invite each participant, to ensure the appropriate size and composition of the group, which typically includes about ten CEOs whose organizations cover a broad cross section of industries. These CEOs run public companies based in advanced economies. They have been appointed and are either waiting to take office or within the first few months of tenure. Since the program's inception several years ago, about 50 new CEOs have participated, from world-leading companies such as Applied Materials, BellSouth, Cadbury Schweppes, Caterpillar, Lloyds TSB, Lowe's, Novartis, Schlumberger, UPS, and Walgreens. Recently, a group of early workshop participants reconvened to review the first several years in their jobs and to recalibrate their agendas.

The workshop offers a unique perspective from which to explore both the predictable and the surprising aspects of becoming a CEO. We interview all participants in advance, using a structured set of questions about their strategy, their relationship with the board, and their immediate and longer-term challenges. Discussion sessions during the two-day program are built around these and other areas where new CEOs face unfamiliar challenges, and around peer and faculty dialogue.

We typically start by asking the CEOs to look ahead to the end of their tenure and give their retirement speech. The next day, we ask them to describe their immediate challenges. We then closely examine some of these challenges, such as crafting a strategy that creates lasting economic value, building a productive relationship with the board of directors, communicating effectively with inside and outside constituencies, and setting the proper tone and style to create a strong culture. The sessions are extremely interactive, and discussions involve in-depth sharing of personal experiences.

The seven surprises to new CEOs described in this article are challenges highlighted again and again in our workshop discussions. The stories we use to illustrate these lessons are drawn from the experiences of participants and from our own collective experiences working with CEOs. (We are grateful to Patia McGrath, our research associate, for her help in organizing these workshops and in preparing this article.)

One of our new CEOs learned this the hard way. Soon after he became CEO, he was asked to approve a marketing campaign for the launch of a new product. The campaign was the result of more than a year's work by a division manager and his team. They had developed advertising, prepared promotional materials, crafted a sales and distribution plan, and assigned responsibilities for different parts of the plan. All that was needed was the new CEO's approval, which the executives assumed was largely a formality.

The CEO saw it differently. He felt that the company's advertising had become stale and that a makeover should start right away—and this would most likely mean hiring a new agency. He put the marketing campaign on hold until a new advertising plan could be developed—a decision that he hoped would send a strong signal about the changes he meant to introduce. Little did he realize that he had sent several other powerful signals as well.

Word of his order spread like wildfire. The CEO's calendar was soon filled with meetings with executives seeking approval of their plans. Some came to obtain consent for new capital expenditures, others for personnel decisions, and others on matters as mundane as whether to host a client conference. They had lost confidence that they understood the CEO's expectations, so they wanted to check with him before proceeding on anything. His calendar became a bottleneck, and organizational decision making virtually ground to a halt.

For a while, the CEO was oblivious to the high cost of his intrusive approach. As an outsider new to the com-

The most powerful CEOs expand the power of those around them.

pany, he felt good about being part of all these conversations. He was now at the center of all the action. He viewed each meeting as an opportunity to communicate the new direction in which he hoped to take the

company. But he began to recognize the impact of his actions when the division manager he had overruled came forward a month later with the news that he had decided to accept a job at another company. This came as a shock to the CEO, who, despite nixing the ad campaign, had been quite impressed with the other elements of the marketing program and the thoroughness with which they had been planned. What he had failed to understand was that he had undermined the manager's self-confidence as well as his authority with his subordinates and peers. As hard as the CEO tried to persuade him to reconsider and stay, the manager felt so demoralized that he was determined to leave.

Chastened, the CEO called a meeting of all his top managers the next week. He reassured them that they enjoyed his full confidence and that he had no intention of undermining their authority as he had done with the departing division manager. He candidly admitted that he might have been too precipitous in halting the marketing campaign, especially since he had not yet fully communicated his new strategy for the company. He identified the areas in which he wanted to make strategic changes, emphasizing that all this was a work in progress, to be completed with everyone's help. He clarified the issues on which he wanted to be consulted and those on which he

The Seven Things You Need to Know

Most new chief executives are taken aback by the unexpected and unfamiliar new roles, the time and information limitations, and the altered professional relationships they run up against. Here are the common surprises new CEOs face, and here's how to tell when adjustments are necessary.

Surprise One:

You Can't Run the Company

warning signs:

- You are in too many meetings and involved in too many tactical discussions.
- There are too many days when you feel as though you have lost control over your time.

Surprise Two:

Giving Orders Is Very Costly

warning signs:

- You have become the bottleneck.
- Employees are overly inclined to consult you before they act.
- People start using your name to endorse things, as in, "Frank says..."

Surprise Three:

It Is Hard to Know What Is Really Going On

warning signs:

- You keep hearing things that surprise you.
- You learn about events after the fact.
- You hear concerns and dissenting views through the grapevine rather than directly.

would fully trust his managers. He created a task force to review some of the company's key management processes – planning, budgeting, performance evaluation, new product rollout, development of marketing campaigns, and recruitment of key employees—to ensure that there would be opportunities for early CEO input. Finally, he spent the next year working hard to make sure that his vision and agenda were clear to all employees, especially his senior management team. (We know this because he stayed in touch with us after the workshop, as many participants do.)

This CEO concluded, and we would agree, that it is rarely a good idea to unilaterally overrule a thoughtful decision that has cleared several other organizational hurdles. Indeed, a key indicator the CEO subsequently used to judge the health of the company's management processes was how enthusiastically he could approve the decisions that came his way. The need to overrule something is a sure sign of a broader organizational failure. Or, as hard as this is to admit, it may reflect the CEO's own failure to clearly communicate his strategy and operating principles. There are certainly some circumstances in which the harm done by moving forward with a major strategic decision that the CEO considers a serious mistake – a large acquisition, say – is greater than the harm done by issuing orders. But, as this CEO himself eventually acknowledged, the ad makeover could have waited.

A new CEO may need to put a stake in the ground to show that he's in charge and to let the organization know what he stands for. Giving a direct order (and especially undoing someone's work) is rarely the best way to do this, however. Instead, a CEO should look for ways to include senior managers and to promote agreement about deci-

sion-making criteria. At an off-site meeting, for example, the CEO can reveal his priorities and concerns by setting the agenda while giving his team a chance to participate and buy in. A new CEO must be willing to share power and trust others to make important decisions. The most powerful CEO is the one who expands the power of those around him.

Surprise Three:

It Is Hard to Know What Is Really Going On

Even when CEOs understand that they cannot oversee every aspect of their companies, they nevertheless assume—wrongly—that they will be able to learn everything they need to know. Certainly, CEOs are flooded with information, but reliable information is surprisingly scarce. All information coming to the top is filtered, sometimes with good intentions, sometimes with not such good intentions. Receiving solid information becomes even more difficult because immediately upon appointment, the CEO's relationships change. Former peers and subordinates who used to constitute an informal channel—those who could read between the lines and who really knew what was happening at the ground level—go on their guard. Even those the CEO was closest to are wary of delivering bad news. Further, because the CEO can have so much impact on anyone's career, each individual's agenda colors the information the CEO receives.

Look at the experience of one workshop participant, whose organization was an equal partner in a poorly performing joint venture. As revenues failed to materialize

Surprise Four:

You Are Always Sending a Message

warning signs:

- Employees circulate stories about your behavior that magnify or distort reality.
- People around you act in ways that indicate they're trying to anticipate your likes and dislikes.

Surprise Five:

You Are Not the Boss

warning signs:

- You don't know where you stand with board members.
- Roles and responsibilities of the board members and of management are not clear.
- The discussions in board meetings are limited mostly to reporting on results and management's decisions.

Surprise Six:

Pleasing Shareholders Is Not the Goal

warning signs:

- Executives and board members judge actions by their effect on stock price.
- Analysts who don't understand the business push for decisions that risk the health of the company.
- Management incentives are disproportionately tied to stock price.

Surprise Seven:

You Are Still Only Human

warning signs:

- You give interviews about you rather than about the company.
- Your lifestyle is more lavish or privileged than that of other top executives in the company.
- You have few if any activities not connected to the company.

and costs continued to rise, the CEO tried to better understand the lackluster performance by holding several reviews with key managers involved in the venture. Their explanations for the unimpressive results were not surprising: The managers placed the blame squarely on the JV partner. When it became clear to the CEO that he would not find out what was really going on simply by asking his own team for information, he approached senior managers from the other company – ones who, as it happened, were not directly involved in the JV's operations. Their understanding of the situation was different from what the CEO's own people had been telling him, and the partner's managers offered many constructive observations on the JV's operations. In the end, the CEO recognized that the root cause of the problems was a lack of clarity – on both sides of the partnership – about the JV's objectives. His company eventually bought its way out of the venture, at a loss.

Looking back, the CEO did not feel that his team hid information with malicious intent. For one thing, he realized, his people had a natural instinct to protect themselves, especially in front of their leader. Others who knew how serious the problems were perhaps refrained from speaking up because they were concerned that the CEO would shoot the messenger. Also, it was inherently difficult for operating management to recognize the problem, which lay not in operational details but in the unclear and clashing goals with which the joint venture was established. For the CEO, the biggest surprise was having to seek external feedback to better assess what was really going on within his organization, because a clear picture was so hard to get from his own people.

It is a delicate challenge for a CEO to find reliable sources of information without undermining key reports, who might feel that the CEO is going around them. Many workshop participants recounted their efforts to engage in periodic face-to-face conversations with people at different levels and in various parts of the company. One CEO, for example, invited a group of ten to 12 employees to have lunch with him weekly. Employees volunteered to participate, and the group included people from all levels and divisions; managers were not allowed to attend with their direct reports. While the CEO recognized that not everyone in these lunches would speak frankly, he found that an informal setting reduced barriers to communication and provided an opportunity to hear the ideas and opinions of a cross section of employees. Other CEOs described using field visits and town-hall-type forums to pick up relatively unfiltered information.

Several new CEOs stressed the importance of continuing to seek information from deep within the organization – from employees closest to the front line – even though that approach might not sit well with managers in the middle. A CEO of a high-technology firm, for example, went several levels down to determine the status of tech-

nical projects by asking those directly involved how the work was progressing. He didn't tell the senior people overseeing the projects that he was taking these surprise "temperature checks." Another CEO took it as a warning sign if senior executives tried to discourage him from speaking directly to their subordinates. He underscored, however, that this sort of contact worked only if it was maintained regularly, so that it was not considered a big event – and if the people who spoke to the CEO felt confident that their candor would not come back to haunt them.

Many CEOs in the workshop find that unbiased information is available from external channels – for instance, through contact with customers, conversations with other CEOs, and affiliations with industry associations. Almost every workshop participant allocated time for such external discussions through a systematic process. Several CEOs also pointed to productive relationships they had with independent advisers who could tell the unabashed truth and had license to criticize the CEO's thinking.

Surprise Four:

You Are Always Sending a Message

The typical new CEO knows that his actions will be noticed by those in his company. What he does not generally realize is the extent to which his every move – both inside and outside the organization – will be scrutinized and interpreted. His words and deeds, however small or off-the-cuff, are instantly spread and amplified, and sometimes drastically misinterpreted. (Remember the CEO who pulled the marketing campaign.) Even personal choices are subject to scrutiny. One CEO in our workshop joked that he had to choose the type of car he drove very carefully because the company parking lot would soon be full of the same model.

The first big message is in the CEO's appointment itself. People develop assumptions and expectations based on the CEO's background and previous experiences. This initial profile immediately takes on great significance. One CEO, the first American to take the helm of his major British company, reflected in our workshop that many constituencies expected the "barbaric American" to try to change the firm's centuries-old traditions and culture. A CEO with a legal background recounted how the markets reacted negatively to his appointment, on the assumption that the only reason to make a lawyer CEO was that the company was facing deeper asbestos-litigation problems than previously acknowledged. These sorts of messages are sent before the new CEO even does anything.

Once in the job, the new CEO can no longer afford to have speculative discussions with employees, because any half-baked idea he puts forth runs the risk of being latched onto as a good one. The CEO's microphone is al-

ways on, and his message can become distorted. Even an innocent question may be interpreted as a loss of confidence. The aura attached to the executive's words is illustrated in a story we heard from one CEO, who found, to his surprise, that too many people were invoking his name—hoping that simply starting a sentence with “Frank says...” would ensure action, even though, in most cases, Frank hadn't said anything of the sort.

And so new CEOs need to learn quickly what signals they are sending. They can then minimize inadvertent messages and maximize the impact of the messages they want to send, once they understand the multiplier effect of their words and actions. Consider, for example, the experience of one new CEO, whose organization is based in the southeastern United States. The company had avoided racially related class action lawsuits, even though other companies in the region had not. It had clear standards covering employee behavior, including a rule forbidding the display of the Confederate flag. When the local press revealed that one member of the executive team had publicly advocated that the company display the flag, the CEO immediately had that person terminated. As the CEO described it, he did this to signal that behavior inconsistent with company policy would not be tolerated at any level in the organization. No one had to guess the CEO's views on this topic—he sent a clear message.

To take another example, a new CEO of a transportation company wanted to signal the importance of customer and employee safety. While on a site visit, he noticed that a fire switch was disconnected on one rail car, so he shut down all trains in the system until every switch could be checked. He also launched an investigation into why the switch was disconnected, to prevent a recurrence. Although there were redundant systems in place, the CEO wanted his actions to send a message—both internally and externally—that nothing short of perfect safety compliance would be acceptable. He also hoped that employees would in turn feel empowered to do whatever was necessary to ensure safety.

A CEO's signals, already subject to misinterpretation, are further complicated by the fact that different constituencies will respond to the same news in different ways. It is particularly challenging when signals are sent

to both internal and external groups. While Wall Street might delight in hearing a plan for a struggling unit's spin-off, for instance, employees may be shattered. The task of managing outside and inside constituencies, while keeping the message truthful and consistent to both, is never easy. The important lesson for new CEOs is to consider carefully how their actions and the way these are communicated will be interpreted by different audiences. An executive may be unable to avoid some negative impact on one group or another, but by thoughtfully framing his message, he can minimize the damage.

Finally, to the extent possible, CEOs must strive for consistency in their messages. A simple, clear message, repeated often and illustrated with memorable stories, is the best way for a new CEO to master the communication challenges of the job.

Surprise Five:

You Are Not the Boss

Many new CEOs initially assume that they have finally reached a position where they have ultimate authority. They soon learn that the situation is much more complicated than that. Although the CEO may sit at the top of the management hierarchy, he still reports to the board of directors. The board hired him and can also fire him; it has the power to evaluate his performance, set his compensation, overturn his strategy, and make other major decisions. CEOs must attend to this relationship more today than ever before as new laws and regulations, court decisions, and shareholder activism have empowered

and emboldened boards. As one new CEO told us, “We no longer have a clear picture of how to work with the board.” Even if the relationship isn't contentious, it's become a bigger drain on the CEO's time and energy.

Just when new CEOs think they can finally stop managing upward, the need to do so grows in complexity. Instead of reporting to a single boss, the new CEO has ten or 12 bosses, one of whom is often a “lead director,” who, by virtue of that position, is meant to balance the CEO's authority. And although the board is likely to comprise experienced and capable people, many members will have limited knowledge of the company's industry. This



means the CEO (along with the management team) has to educate the board about what is happening in the company and the industry. While the CEO may have problems in getting information, the worst thing for his relationship with the board is for the directors to feel uninformed or surprised. Because board members have many demands on their time, information must be transmitted to them in a way that is easy to understand.

Moreover, most board members may have had little previous contact with the new CEO. Even if he was promoted from within and was previously on the board, their interaction with him was probably infrequent and brief. He has to spend time letting members get to know him and develop confidence in his ability and judgment. Should the new CEO's predecessor remain involved, in the chairman's seat or on the board, the challenge becomes even greater. The former CEO brings board relationships and a legacy of decisions that the new CEO may wish to reconsider. All of this creates awkwardness in the boardroom and makes it difficult for the successor to work with the board. In our experience, it is almost always a bad idea for a predecessor to remain on the board.

For one new CEO, the first few weeks in office were a trial by fire. The board had ousted his predecessor and the entire management team, and the company was undergoing an SEC investigation. The new CEO arrived amid falling employee morale, defecting customers, and media scrutiny. He resolved to quickly reinvent the company with new accounting policies, a new management team, and, eventually, a new strategic direction. But he soon realized that the company's directors, having been burned by the previous management, were keeping the company (and him) under much tighter control. It became evident that the board wanted to temper and closely monitor his actions. He immediately concluded he had to work carefully with the directors, trying his ideas on them early to get their support. Although this took more of his time than he had ever anticipated, he gradually earned their trust and was then able to move more quickly. While this example may be extreme, its lesson is applicable to all CEOs: At the end of the day, the board – not the CEO – is in charge.

As the CEO develops his boardroom relationships, he must view the directors as neither friends nor confidants (though some of them may eventually play those roles), but as bosses who hold him personally accountable for the success of the company. By actively investing in director knowledge and relationships—through one-on-one contacts, e-mail updates of corporate progress, and distribution of background material, for example – the best CEOs turn board meetings into participatory discussions rather than show-and-tell sessions by management. A new CEO who is open with – and creates the opportunity to collaborate with – his directors will be more likely to garner support from these bosses.

Surprise Six:

Pleasing Shareholders Is Not the Goal

Upon taking office, new CEOs often mistakenly believe that their primary responsibility is to keep the shareholders happy. After all, shareholder value is the mantra that has defined corporate goals for many years. Courting the favor of analysts and shareholders seems natural, and every CEO (especially a new one) likes an endorsement of his leadership through a higher share price.

The problem is that defining one's goal as shareholder approval may not be in the company's best interest. Actions and strategies favored by shareholders (and analysts) may not benefit the ultimate competitive position of the company. Shareholders come and go – the average share of stock in the United States is held for less than a year – and they care only about what happens to the stock during the period they expect to own it. Analysts are naturally concerned with moving in and out of a stock, not holding it. They tend to reinforce trends – and love deals – rather than reward a long-term focus. In fact, both shareholders and analysts are prone to take a short-term view. CEOs, however, need to concern themselves with creating sustainable economic value.

Sometimes the pressure from analysts and shareholders can get so strong that it becomes destructive. One CEO in our workshop said he'd felt compelled to spin off a major division – a dramatic step that appeased analysts in the short term. Unfortunately, it hurt the longer-term performance of the company because the sale of this division drove away some customers who were vital to the growth of other divisions.

An involved, informed board can be the CEO's best ally in staying focused on the long run. The CEO of a major retailer described the perfect storm he was stepping into when he took office: a mature industry, the seemingly unconquerable Wal-Mart, and a lackluster economy. As the CEO described it, the business was badly broken, and he needed time to restore it to its former success. He worked with the board to develop a new strategy focused on regaining market share. After two quarters of heavy lifting, results began to improve. The board was pleased and employees were energized, but the analysts remained conspicuously bearish. They saw the new strategy as being too slow and drawn out. After a number of time-consuming and fruitless meetings with them, the CEO came to understand that the analysts were interested only in immediate, dramatic change – regardless of the long-run effects on the company. As he told us, "There comes a time when you just don't give a damn what the analysts think." This CEO was able to keep the focus where it needed to be because he had worked hard to ensure that his board bought into the long-term merits of the turnaround strategy.

Rather than attempt to please all shareholders through the inevitable ups and downs, CEOs must recognize that, ultimately, it is only long-term profitability that matters, not today's growth expectations or even the stock price. A high stock price will eventually collapse without the underpinnings of fundamental competitive advantage. Instead of looking to shareholders for strategic direction, the CEO must develop and articulate a clear strategy to distinguish the company from others and address indus-

try fundamentals. A key CEO role is to sell the strategy and shape how analysts and shareholders look at the company. CEOs should not expect that their strategies will be immediately understood or accepted; a constant stream of reiterations, explanations, and reminders will likely be necessary to affect analysts' perceptions. Success in this process may be slow. But a CEO with the courage to develop and articulate a sound strategy, even if it is currently unpopular on Wall Street, will eventually attract the right shareholders—those who buy and hold the stock because they believe in the big-picture strategy.

they can balance their new challenges with their personal lives without too much trouble – after all, they've managed to do so in other senior management positions. However, the CEO role, with all its demands and its public nature, can significantly intensify this tension. As one CEO concluded, "In the end, there is no such thing as balance. There are only trade-offs."

The difficulties don't arise solely from time constraints. Many aspects of a CEO's life become public that most of

CEOs can easily lose their legitimacy if their vision is unconvincing, if their actions are inconsistent with the values they espouse, or if their self-interest appears to trump the welfare of the organization.

try fundamentals. A key CEO role is to sell the strategy and shape how analysts and shareholders look at the company. CEOs should not expect that their strategies will be immediately understood or accepted; a constant stream of reiterations, explanations, and reminders will likely be necessary to affect analysts' perceptions. Success in this process may be slow. But a CEO with the courage to develop and articulate a sound strategy, even if it is currently unpopular on Wall Street, will eventually attract the right shareholders—those who buy and hold the stock because they believe in the big-picture strategy.

Surprise Seven:

You Are Still Only Human

Too often, we view CEOs in the cinematic image of indefatigable superhero. Yet they remain bound by all-too-human hopes, fears, and limits. The attention and adulation that come with the job make introspection difficult and vulnerabilities inadmissible. Workshop participants told us again and again that they needed to make a conscious effort to resist the illusion of self-importance, omnipotence, and omniscience. The executives in our workshop have been remarkably forthcoming about the personal impact of being a CEO. Invariably, they have had to come to terms with the fact that they can't do everything well. They have found it difficult and ego-bruising to accept gaps in their expertise and admit that the job is more physically and emotionally taxing than any others they have held.

Maintaining some balance between the personal and the professional is another theme that comes up repeatedly in our workshop. It's easy for a new CEO to underestimate the number and magnitude of demands that will be placed upon him. Many new CEOs are confident that

us would prefer to keep private. One CEO told us that his teenage daughter approached him after she read a high-profile newspaper article disclosing his compensation. He had never before discussed his income with his children. Even though his pay was quite modest compared with that of his peers, he had to explain to his family why he earned what he did. Another CEO said that he was dreading the first family holiday gathering after he'd become CEO and the reactions of his siblings now that his success was so public. Virtually every new CEO reports that relationships with friends and family have changed.

It surprised us that many new CEOs—even in the early days—were already thinking about their legacies. While this can lead to a long-term focus, which is desirable, it can also lead to bold (and even reckless) attempts to make a mark on the company by changing what should be left unchanged. With such goals, it is easy to be seduced by major deals and tempting to create an organization that is three times larger even if it is less profitable.

It is essential for new CEOs to make a disciplined effort to stay humble, to revisit their decisions and actions, to continue to listen to others, and to find people who will be honest and forthright. Otherwise, the rewards and praise bestowed upon a CEO can tempt him into acts of hubris. A capable and active board can also provide a check on such temptations.

Workshop participants recognized that they needed connections to the world outside their organizations, at home and in the community, to avoid being consumed by their corporate lives. Many found personally fulfilling outlets for their human needs through public service commitments. CEOs needed and wanted some relaxation too. Regular exercise, family vacations, and golf seemed to be the preferred avenues, though one CEO even took

up race car driving as a hobby. He explained that he knew he would never be Mario Andretti, but he could occupy and challenge himself by trying.

Implications for CEO Leadership

Taken together, the seven surprises carry some important and subtle implications for how a new CEO should define his job.

First, the CEO must learn to manage organizational context rather than focus on daily operations. Providing leadership in this way – and not diving into the details – can be a jarring transition. One CEO said that he initially felt like the company’s “most useless executive,” despite the power inherent in the job. The CEO needs to learn how to act in indirect ways – setting and communicating strategy, putting sound processes in place, selecting and mentoring key people – to create the conditions that will help others make the right choices. At the same time, he must set the tone and define the organization’s culture and values through his words and actions – in other words, demonstrate how employees should behave.

Second, he must recognize that his position does not confer the right to lead, nor does it guarantee the organization’s loyalty. He must perpetually earn and maintain the moral mandate to lead. CEOs can easily lose their legitimacy if their vision is unconvincing, if their actions are inconsistent with the values they espouse, or if their self-interest appears to trump the welfare of the organization. They must realize that success ultimately depends on their ability to enlist the voluntary commitment rather than the forced obedience of others. While mastering the conventional tools of management may have won the CEO his job, these tools alone will not keep him there.

Finally, the CEO must not get totally absorbed in the role. Even if others think he is omnipotent, he is still only human. Failing to recognize this will lead to arrogance, exhaustion, and a shortened tenure. Only by maintaining a personal balance and staying grounded can the CEO achieve the perspective required to make decisions in the interest of the company and its long-term prosperity. ▢

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“All in favor of putting the sales staff on performance-enhancing drugs?”

KIM WARP

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BLUE OCEAN STRATEGY

by W. Chan Kim and
Renée Mauborgne

A ONETIME ACCORDION PLAYER, stilt walker, and fire-eater, Guy Laliberté is now CEO of one of Canada's largest cultural exports, Cirque du Soleil. Founded in 1984 by a group of street performers, Cirque has staged dozens of productions seen by some 40 million people in 90 cities around the world. In 20 years, Cirque has achieved revenues that Ringling Bros. and Barnum & Bailey – the world's leading circus – took more than a century to attain.

Cirque's rapid growth occurred in an unlikely setting. The circus business was (and still is) in long-term decline. Alternative forms of entertainment – sporting events, TV, and video games – were casting a growing shadow. Children, the mainstay of the circus audience, preferred PlayStations to circus acts. There was also rising sentiment,

MICK WIGGINS



Competing in overcrowded industries is no way to sustain high performance. The real opportunity is to create **blue oceans of uncontested market space.**

fueled by animal rights groups, against the use of animals, traditionally an integral part of the circus. On the supply side, the star performers that Ringling and the other circuses relied on to draw in the crowds could often name their own terms. As a result, the industry was hit by steadily decreasing audiences and increasing costs. What's more, any new entrant to this business would be competing against a formidable incumbent that for most of the last century had set the industry standard.

How did Cirque profitably increase revenues by a factor of 22 over the last ten years in such an unattractive environment? The tagline for one of the first Cirque productions is revealing: "We reinvent the circus." Cirque did not make its money by competing within the confines of the existing industry or by stealing customers from Ringling and the others. Instead it created uncontested market space that made the competition irrelevant. It pulled in a whole new group of customers who were traditionally noncustomers of the industry – adults and cor-

porate clients who had turned to theater, opera, or ballet and were, therefore, prepared to pay several times more than the price of a conventional circus ticket for an unprecedented entertainment experience.

To understand the nature of Cirque's achievement, you have to realize that the business universe consists of two distinct kinds of space, which we think of as red and blue oceans. Red oceans represent all the industries in existence today – the known market space. In red oceans, industry boundaries are defined and accepted, and the competitive rules of the game are well understood. Here, companies try to outperform their rivals in order to grab a greater share of existing demand. As the space gets more and more crowded, prospects for profits and growth are reduced. Products turn into commodities, and increasing competition turns the water bloody.

Blue oceans denote all the industries *not* in existence today – the unknown market space, untainted by competition. In blue oceans, demand is created rather than

fought over. There is ample opportunity for growth that is both profitable and rapid. There are two ways to create blue oceans. In a few cases, companies can give rise to completely new industries, as eBay did with the online auction industry. But in most cases, a blue ocean is created from within a red ocean when a company alters the boundaries of an existing industry. As will become evident later, this is what Cirque did. In breaking through the boundary traditionally separating circus and theater, it made a new and profitable blue ocean from within the red ocean of the circus industry.

Cirque is just one of more than 150 blue ocean creations that we have studied in over 30 industries, using data stretching back more than 100 years. We analyzed companies that created those blue oceans and their less successful competitors, which were caught in red oceans. In studying these data, we have observed a consistent pattern of strategic thinking behind the creation of new markets and industries, what we call blue ocean strategy. The logic behind blue ocean strategy parts with traditional models focused on competing in existing market space. Indeed, it can be argued that managers' failure to realize the differences between red and blue ocean strategy lies behind the difficulties many companies encounter as they try to break from the competition.

In this article, we present the concept of blue ocean strategy and describe its defining characteristics. We assess the profit and growth consequences of blue oceans and discuss why their creation is a rising imperative for companies in the future. We believe that an understanding of blue ocean strategy will help today's companies as they struggle to thrive in an accelerating and expanding business universe.

Blue and Red Oceans

Although the term may be new, blue oceans have always been with us. Look back 100 years and ask yourself which industries known today were then unknown. The answer: Industries as basic as automobiles, music recording, aviation, petrochemicals, pharmaceuticals, and management consulting were unheard-of or had just begun to emerge. Now turn the clock back only 30 years and ask yourself the same question. Again, a plethora of

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A Snapshot of Blue Ocean Creation

This table identifies the strategic elements that were common to blue ocean creations in three different industries in different eras. It is not intended to be comprehensive in coverage or exhaustive in content. We chose to show American industries because they represented the largest and least-regulated market during our study period. The pattern of blue ocean creations exemplified by these three industries is consistent with what we observed in the other industries in our study.

multibillion-dollar industries jump out: mutual funds, cellular telephones, biotechnology, discount retailing, express package delivery, snowboards, coffee bars, and home videos, to name a few. Just three decades ago, none of these industries existed in a meaningful way.

This time, put the clock forward 20 years. Ask yourself: How many industries that are unknown today will exist then? If history is any predictor of the future, the answer is many. Companies have a huge capacity to create new industries and re-create existing ones, a fact that is reflected in the deep changes that have been necessary in the way industries are classified. The half-century-old Standard Industrial Classification (SIC) system was replaced in 1997 by the North American Industry Classification System (NAICS). The new system expanded the ten SIC industry sectors into 20 to reflect the emerging realities of new industry territories—blue oceans. The services sector under the old system, for example, is now seven sectors ranging from information to health care and social assistance. Given that these classification systems are designed for standardization and continuity, such a replacement shows how significant a source of economic growth the creation of blue oceans has been.

Looking forward, it seems clear to us that blue oceans will remain the engine of growth. Prospects in most established market spaces—red oceans—are shrinking steadily. Technological advances have substantially improved industrial productivity, permitting suppliers to produce an unprecedented array of products and services. And as trade barriers between nations and regions fall and information on products and prices becomes instantly and globally available, niche markets and monopoly havens are continuing to disappear. At the same time, there is little evidence of any increase in demand, at least in the developed markets, where recent United Nations statistics even point to declining populations. The result is that in more and more industries, supply is overtaking demand.

	Key blue ocean creations	Was the blue ocean created by a new entrant or an incumbent?	Was it driven by technology pioneering or value pioneering?	At the time of the blue ocean creation, was the industry attractive or unattractive?
Automobiles	Ford Model T Unveiled in 1908, the Model T was the first mass-produced car, priced so that many Americans could afford it.	New entrant	Value pioneering* (mostly existing technologies)	Unattractive
	GM's "car for every purse and purpose" GM created a blue ocean in 1924 by injecting fun and fashion into the car.	Incumbent	Value pioneering (some new technologies)	Attractive
	Japanese fuel-efficient autos Japanese automakers created a blue ocean in the mid-1970s with small, reliable lines of cars.	Incumbent	Value pioneering (some new technologies)	Unattractive
	Chrysler minivan With its 1984 minivan, Chrysler created a new class of automobile that was as easy to use as a car but had the passenger space of a van.	Incumbent	Value pioneering (mostly existing technologies)	Unattractive
Computers	CTR's tabulating machine In 1914, CTR created the business machine industry by simplifying, modularizing, and leasing tabulating machines. CTR later changed its name to IBM.	Incumbent	Value pioneering (some new technologies)	Unattractive
	IBM 650 electronic computer and System/360 In 1952, IBM created the business computer industry by simplifying and reducing the power and price of existing technology. And it exploded the blue ocean created by the 650 when in 1964 it unveiled the System/360, the first modularized computer system.	Incumbent	Value pioneering (650: mostly existing technologies) Value and technology pioneering (System/360: new and existing technologies)	Nonexistent
	Apple personal computer Although it was not the first home computer, the all-in-one, simple-to-use Apple II was a blue ocean creation when it appeared in 1978.	New entrant	Value pioneering (mostly existing technologies)	Unattractive
	Compaq PC servers Compaq created a blue ocean in 1992 with its ProSignia server, which gave buyers twice the file and print capability of the minicomputer at one-third the price.	Incumbent	Value pioneering (mostly existing technologies)	Nonexistent
	Dell built-to-order computers In the mid-1990s, Dell created a blue ocean in a highly competitive industry by creating a new purchase and delivery experience for buyers.	New entrant	Value pioneering (mostly existing technologies)	Unattractive
Movie Theaters	Nickelodeon The first Nickelodeon opened its doors in 1905, showing short films around-the-clock to working-class audiences for five cents.	New entrant	Value pioneering (mostly existing technologies)	Nonexistent
	Palace theaters Created by Roxy Rothapfel in 1914, these theaters provided an operalike environment for cinema viewing at an affordable price.	Incumbent	Value pioneering (mostly existing technologies)	Attractive
	AMC multiplex In the 1960s, the number of multiplexes in America's suburban shopping malls mushroomed. The multiplex gave viewers greater choice while reducing owners' costs.	Incumbent	Value pioneering (mostly existing technologies)	Unattractive
	AMC megaplex Megaplexes, introduced in 1995, offered every current blockbuster and provided spectacular viewing experiences in theater complexes as big as stadiums, at a lower cost to theater owners.	Incumbent	Value pioneering (mostly existing technologies)	Unattractive

*Driven by value pioneering does not mean that technologies were not involved. Rather, it means that the defining technologies used had largely been in existence, whether in that industry or elsewhere.



This situation has inevitably hastened the commoditization of products and services, stoked price wars, and shrunk profit margins. According to recent studies, major American brands in a variety of product and service categories have become more and more alike. And as brands become more similar, people increasingly base purchase choices on price. People no longer insist, as in the past, that their laundry detergent be Tide. Nor do they necessarily stick to Colgate when there is a special promotion for Crest, and vice versa. In overcrowded industries, differentiating brands becomes harder both in economic upturns and in downturns.

The Paradox of Strategy

Unfortunately, most companies seem becalmed in their red oceans. In a study of business launches in 108 companies, we found that 86% of those new ventures were line extensions—incremental improvements to existing industry offerings—and a mere 14% were aimed at creating new markets or industries. While line extensions did account for 62% of the total revenues, they delivered only 39% of the total profits. By contrast, the 14% invested in creating new markets and industries delivered 38% of total revenues and a startling 61% of total profits.

So why the dramatic imbalance in favor of red oceans? Part of the explanation is that corporate strategy is heavily influenced by its roots in military strategy. The very language of strategy is deeply imbued with military references—chief executive “officers” in “headquarters,” “troops” on the “front lines.” Described this way, strategy is all about red ocean competition. It is about confronting an opponent and driving him off a battlefield of limited territory. Blue ocean strategy, by contrast, is about doing business where there is no competitor. It is about creating new land, not dividing up existing land. Focusing on the red ocean therefore means accepting the key constraining factors of war—limited terrain and the need to beat

an enemy to succeed. And it means denying the distinctive strength of the business world—the capacity to create new market space that is uncontested.

The tendency of corporate strategy to focus on winning against rivals was exacerbated by the meteoric rise of Japanese companies in the 1970s and 1980s. For the first time in corporate history, customers were deserting Western companies in droves. As competition mounted in the global marketplace, a slew of red ocean strategies emerged, all arguing that competition was at the core of corporate success and failure. Today, one hardly talks about strategy without using the language of competition. The term that best symbolizes this is “competitive advantage.” In the competitive-advantage worldview, companies are often driven to outperform rivals and capture greater shares of existing market space.

Of course competition matters. But by focusing on competition, scholars, companies, and consultants have ignored two very important—and, we would argue, far more lucrative—aspects of strategy: One is to find and develop markets where there is little or no competition—blue oceans—and the other is to exploit and protect blue oceans. These challenges are very different from those to which strategists have devoted most of their attention.

Toward Blue Ocean Strategy

What kind of strategic logic is needed to guide the creation of blue oceans? To answer that question, we looked back over 100 years of data on blue ocean creation to see what patterns could be discerned. Some of our data are presented in the exhibit “A Snapshot of Blue Ocean Creation.” It shows an overview of key blue ocean creations in three industries that closely touch people’s lives: autos—how people get to work; computers—what people use at work; and movie theaters—where people go after work for enjoyment. We found that:

Blue oceans are not about technology innovation. Leading-edge technology is sometimes involved in the creation of blue oceans, but it is not a defining feature of them. This is often true even in industries that are technology intensive. As the exhibit reveals, across all three representative industries, blue oceans were seldom the result of technological innovation per se; the underlying technology was often already in existence. Even Ford's revolutionary assembly line can be traced to the meat-packing industry in America. Like those within the auto industry, the blue oceans within the computer industry did not come about through technology innovations alone but by linking technology to what buyers valued. As with the IBM 650 and the Compaq PC server, this often involved simplifying the technology.

Incumbents often create blue oceans – and usually within their core businesses. GM, the Japanese automakers, and Chrysler were established players when they created blue oceans in the auto industry. So were CTR and its later incarnation, IBM, and Compaq in the computer industry. And in the cinema industry, the same can be said of palace theaters and AMC. Of the companies listed here, only Ford, Apple, Dell, and Nickelodeon were new entrants in their industries; the first three were start-ups, and the fourth was an established player entering an industry that was new to it. This suggests that incumbents are not at a disadvantage in creating new market spaces. Moreover, the blue oceans made by incumbents were usually within their core businesses. In fact, as the exhibit shows, most blue oceans are created from within, not beyond, red oceans of existing industries. This challenges the view that new markets are in distant waters. Blue oceans are right next to you in every industry.

Company and industry are the wrong units of analysis. The traditional units of strategic analysis – company and industry – have little explanatory power when it comes to analyzing how and why blue oceans are created. There is no consistently excellent company; the same company can be brilliant at one time and wrongheaded at another. Every company rises and falls over time. Likewise, there is no perpetually excellent industry; relative attractiveness is driven largely by the creation of blue oceans from within them.

The most appropriate unit of analysis for explaining the creation of blue oceans is the strategic move – the set of managerial actions and decisions involved in making a major market-creating business offering. Compaq, for example, is considered by many people to be “unsuccessful” because it was acquired by Hewlett-Packard in 2001 and ceased to be a company. But the firm's ultimate fate

does not invalidate the smart strategic move Compaq made that led to the creation of the multibillion-dollar market in PC servers, a move that was a key cause of the company's powerful comeback in the 1990s.

Creating blue oceans builds brands. So powerful is blue ocean strategy that a blue ocean strategic move can create brand equity that lasts for decades. Almost all of the companies listed in the exhibit are remembered in no small part for the blue oceans they created long ago. Very few people alive today were around when the first Model T rolled off Henry Ford's assembly line in 1908, but the company's brand still benefits from that blue ocean

Red Ocean Versus Blue Ocean Strategy

The imperatives for red ocean and blue ocean strategies are starkly different.

Red ocean strategy	Blue ocean strategy
Compete in existing market space.	Create uncontested market space.
Beat the competition.	Make the competition irrelevant.
Exploit existing demand.	Create and capture new demand.
Make the value/cost trade-off.	Break the value/cost trade-off.
Align the whole system of a company's activities with its strategic choice of differentiation <i>or</i> low cost.	Align the whole system of a company's activities in pursuit of differentiation <i>and</i> low cost.

move. IBM, too, is often regarded as an “American institution” largely for the blue oceans it created in computing; the 360 series was its equivalent of the Model T.

Our findings are encouraging for executives at the large, established corporations that are traditionally seen as the victims of new market space creation. For what they reveal is that large R&D budgets are not the key to creating new market space. The key is making the right strategic moves. What's more, companies that understand what drives a good strategic move will be well placed to create multiple blue oceans over time, thereby continuing to deliver high growth and profits over a sustained period. The creation of blue oceans, in other words, is a product of strategy and as such is very much a product of managerial action.

The Defining Characteristics

Our research shows several common characteristics across strategic moves that create blue oceans. We found that the creators of blue oceans, in sharp contrast to companies playing by traditional rules, never use the competition as a benchmark. Instead they make it irrelevant by

In blue oceans, demand is created rather than fought over. There is ample opportunity for growth that is both profitable and rapid.

creating a leap in value for both buyers and the company itself. (The exhibit “Red Ocean Versus Blue Ocean Strategy” compares the chief characteristics of these two strategy models.)

Perhaps the most important feature of blue ocean strategy is that it rejects the fundamental tenet of conventional strategy: that a trade-off exists between value and cost. According to this thesis, companies can either create greater value for customers at a higher cost or create reasonable value at a lower cost. In other words, strategy is essentially a choice between differentiation and low cost. But when it comes to creating blue oceans, the evidence shows that successful companies pursue differentiation and low cost simultaneously.

To see how this is done, let us go back to Cirque du Soleil. At the time of Cirque’s debut, circuses focused on benchmarking one another and maximizing their shares of shrinking demand by tweaking traditional circus acts. This included trying to secure more and better-known clowns and lion tamers, efforts that raised circuses’ cost structure without substantially altering the circus experience. The result was rising costs without rising revenues and a downward spiral in overall circus demand. Enter Cirque. Instead of following the conventional logic of outpacing the competition by offering a better solution to the given problem—creating a circus with even greater fun and thrills—it redefined the problem itself by offering people the fun and thrill of the circus *and* the intellectual sophistication and artistic richness of the theater.

In designing performances that landed both these punches, Cirque had to reevaluate the components of the traditional circus offering. What the company found was that many of the elements considered essential to the fun and thrill of the circus were unnecessary and in many cases costly. For instance, most circuses offer animal acts. These are a heavy economic burden, because circuses have to shell out not only for the animals but also for their training, medical care, housing, insurance, and transportation. Yet Cirque found that the appetite for animal shows was rapidly diminishing because of rising public concern about the treatment of circus animals and the ethics of exhibiting them.

Similarly, although traditional circuses promoted their performers as stars, Cirque realized that the public no

longer thought of circus artists as stars, at least not in the movie star sense. Cirque did away with traditional three-ring shows, too. Not only did these create confusion among spectators forced to switch their attention from one ring to another, they also increased the number of performers needed, with obvious cost implications. And while aisle concession sales appeared to be a good way to generate revenue, the high prices discouraged parents from making purchases and made them feel they were being taken for a ride.

Cirque found that the lasting allure of the traditional circus came down to just three factors: the clowns, the tent, and the classic acrobatic acts. So Cirque kept the clowns, while shifting their humor away from slapstick to a more enchanting, sophisticated style. It glamorized the tent, which many circuses had abandoned in favor of rented venues. Realizing that the tent, more than anything else, captured the magic of the circus, Cirque designed this classic symbol with a glorious external finish and a high level of audience comfort. Gone were the sawdust and hard benches. Acrobats and other thrilling performers were retained, but Cirque reduced their roles and made their acts more elegant by adding artistic flair.

Even as Cirque stripped away some of the traditional circus offerings, it injected new elements drawn from the world of theater. For instance, unlike traditional circuses featuring a series of unrelated acts, each Cirque creation resembles a theater performance in that it has a theme and story line. Although the themes are intentionally vague, they bring harmony and an intellectual element to the acts. Cirque also borrows ideas from Broadway. For example, rather than putting on the traditional “once and for all” show, Cirque mounts multiple productions based on different themes and story lines. As with Broadway productions, too, each Cirque show has an original musical score, which drives the performance, lighting, and timing of the acts, rather than the other way around. The productions feature abstract and spiritual dance, an idea derived from theater and ballet. By introducing these factors, Cirque has created highly sophisticated entertainments. And by staging multiple productions, Cirque gives people reason to come to the circus more often, thereby increasing revenues.



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Cirque offers the best of both circus and theater. And by eliminating many of the most expensive elements of the circus, it has been able to dramatically reduce its cost structure, achieving both differentiation and low cost. (For a depiction of the economics underpinning blue ocean strategy, see the exhibit “The Simultaneous Pursuit of Differentiation and Low Cost.”)

By driving down costs while simultaneously driving up value for buyers, a company can achieve a leap in value for both itself and its customers. Since buyer value comes from the utility and price a company offers, and a company generates value for itself through cost structure and price, blue ocean strategy is achieved only when the whole system of a company’s utility, price, and cost activities is properly aligned. It is this whole-system approach that makes the creation of blue oceans a sustainable strategy. Blue ocean strategy integrates the range of a firm’s functional and operational activities.

A rejection of the trade-off between low cost and differentiation implies a fundamental change in strategic mind-set – we cannot emphasize enough how fundamental a shift it is. The red ocean assumption that industry structural conditions are a given and firms are forced to compete within them is based on an intellectual worldview that academics call the *structuralist* view, or *environmental determinism*. According to this view, companies and managers are largely at the mercy of economic forces greater than themselves. Blue ocean strategies, by contrast, are based on a worldview in which market boundaries and industries can be reconstructed by the actions and beliefs of industry players. We call this the *reconstructionist* view.

The founders of Cirque du Soleil clearly did not feel constrained to act within the confines of their industry. Indeed, is Cirque really a circus with all that it has eliminated, reduced, raised, and created? Or is it theater? If it is theater, then what genre – Broadway show, opera, ballet? The magic of Cirque was created through a reconstruction of elements drawn from all of these alternatives. In the end, Cirque is none of them and a little of all of them. From within the red oceans of theater and circus, Cirque has created a blue ocean of uncontested market space that has, as yet, no name.

Barriers to Imitation

Companies that create blue oceans usually reap the benefits without credible challenges for ten to 15 years, as was the case with Cirque du Soleil, Home Depot, Federal Express, Southwest Airlines, and CNN, to name just a few. The reason is that blue ocean strategy creates considerable economic and cognitive barriers to imitation.

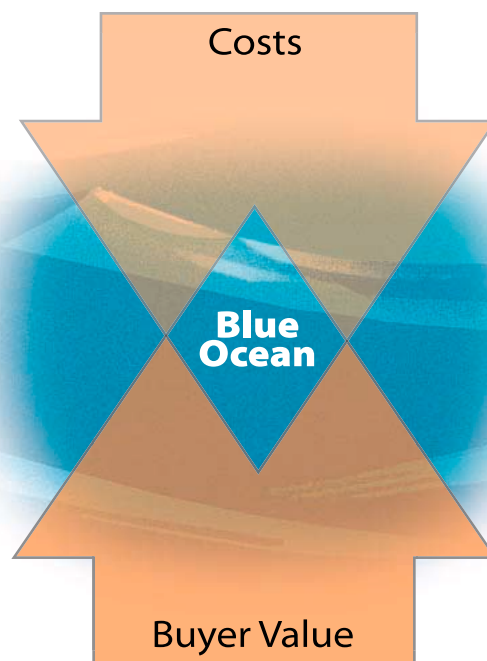
For a start, adopting a blue ocean creator’s business model is easier to imagine than to do. Because blue ocean creators immediately attract customers in large volumes,

they are able to generate scale economies very rapidly, putting would-be imitators at an immediate and continuing cost disadvantage. The huge economies of scale in purchasing that Wal-Mart enjoys, for example, have significantly discouraged other companies from imitating its business model. The immediate attraction of large numbers of customers can also create network externalities. The more customers eBay has online, the more attractive the auction site becomes for both sellers and buyers of wares, giving users few incentives to go elsewhere.

When imitation requires companies to make changes to their whole system of activities, organizational politics may impede a would-be competitor’s ability to switch to the divergent business model of a blue ocean strategy. For instance, airlines trying to follow Southwest’s example of offering the speed of air travel with the flexibility and cost of driving would have faced major revisions in

The Simultaneous Pursuit of Differentiation and Low Cost

A blue ocean is created in the region where a company’s actions favorably affect both its cost structure and its value proposition to buyers. Cost savings are made from eliminating and reducing the factors an industry competes on. Buyer value is lifted by raising and creating elements the industry has never offered. Over time, costs are reduced further as scale economies kick in, due to the high sales volumes that superior value generates.



routing, training, marketing, and pricing, not to mention culture. Few established airlines had the flexibility to make such extensive organizational and operating changes overnight. Imitating a whole-system approach is not an easy feat.

The cognitive barriers can be just as effective. When a company offers a leap in value, it rapidly earns brand buzz and a loyal following in the marketplace. Experience shows that even the most expensive marketing campaigns struggle to unseat a blue ocean creator. Microsoft, for example, has been trying for more than ten years to occupy the center of the blue ocean that Intuit created with its financial software product Quicken. Despite all of its efforts and all of its investment, Microsoft has not been able to unseat Intuit as the industry leader.

In other situations, attempts to imitate a blue ocean creator conflict with the imitator's existing brand image. The Body Shop, for example, shuns top models and makes no promises of eternal youth and beauty. For the established cosmetic brands like Estée Lauder and L'Oréal, imitation was very difficult, because it would have signaled a complete invalidation of their current images, which are based on promises of eternal youth and beauty.

A Consistent Pattern

While our conceptual articulation of the pattern may be new, blue ocean strategy has always existed, whether or not companies have been conscious of the fact. Just consider the striking parallels between the Cirque du Soleil theater-circus experience and Ford's creation of the Model T.

At the end of the nineteenth century, the automobile industry was small and unattractive. More than 500 automakers in America competed in turning out handmade luxury cars that cost around \$1,500 and were enormously unpopular with all but the very rich. Anticar activists tore up roads, ringed parked cars with barbed wire, and organized boycotts of car-driving businessmen and politicians. Woodrow Wilson caught the spirit of the times when he said in 1906 that "nothing has spread socialistic feeling more than the automobile." He called it "a picture of the arrogance of wealth."

Instead of trying to beat the competition and steal a share of existing demand from other automakers, Ford reconstructed the industry boundaries of cars and horse-drawn carriages to create a blue ocean. At the time, horse-drawn carriages were the primary means of local transportation across America. The carriage had two distinct advantages over cars. Horses could easily negotiate the bumps and mud that stymied cars—especially in rain and snow—on the nation's ubiquitous dirt roads. And horses and carriages were much easier to maintain than the luxurious autos of the time, which frequently broke down, requiring expert repairmen who were ex-

pensive and in short supply. It was Henry Ford's understanding of these advantages that showed him how he could break away from the competition and unlock enormous untapped demand.

Ford called the Model T the car "for the great multitude, constructed of the best materials." Like Cirque, the Ford Motor Company made the competition irrelevant. Instead of creating fashionable, customized cars for weekends in the countryside, a luxury few could justify, Ford built a car that, like the horse-drawn carriage, was for everyday use. The Model T came in just one color, black, and there were few optional extras. It was reliable and durable, designed to travel effortlessly over dirt roads in rain, snow, or sunshine. It was easy to use and fix. People could learn to drive it in a day. And like Cirque, Ford went outside the industry for a price point, looking at horse-drawn carriages (\$400), not other autos. In 1908, the first Model T cost \$850; in 1909, the price dropped to \$609, and by 1924 it was down to \$290. In this way, Ford converted buyers of horse-drawn carriages into car buyers—just as Cirque turned theatergoers into circusgoers. Sales of the Model T boomed. Ford's market share surged from 9% in 1908 to 61% in 1921, and by 1923, a majority of American households had a car.

Even as Ford offered the mass of buyers a leap in value, the company also achieved the lowest cost structure in the industry, much as Cirque did later. By keeping the cars highly standardized with limited options and interchangeable parts, Ford was able to scrap the prevailing manufacturing system in which cars were constructed by skilled craftsmen who swarmed around one workstation and built a car piece by piece from start to finish. Ford's revolutionary assembly line replaced craftsmen with unskilled laborers, each of whom worked quickly and efficiently on one small task. This allowed Ford to make a car in just four days—21 days was the industry norm—creating huge cost savings.

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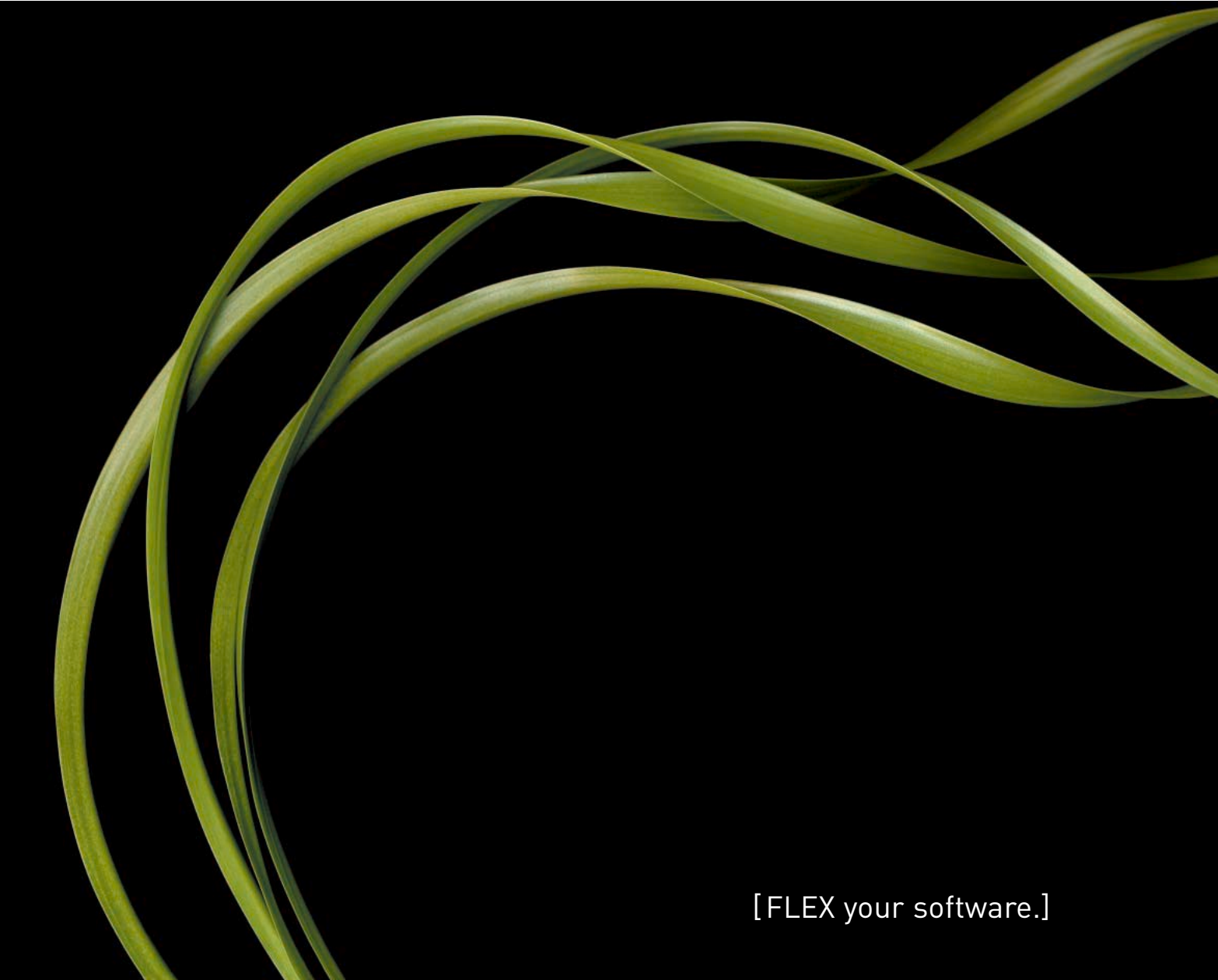
Blue and red oceans have always coexisted and always will. Practical reality, therefore, demands that companies understand the strategic logic of both types of oceans. At present, competing in red oceans dominates the field of strategy in theory and in practice, even as businesses' need to create blue oceans intensifies. It is time to even the scales in the field of strategy with a better balance of efforts across both oceans. For although blue ocean strategists have always existed, for the most part their strategies have been largely unconscious. But once corporations realize that the strategies for creating and capturing blue oceans have a different underlying logic from red ocean strategies, they will be able to create many more blue oceans in the future. 

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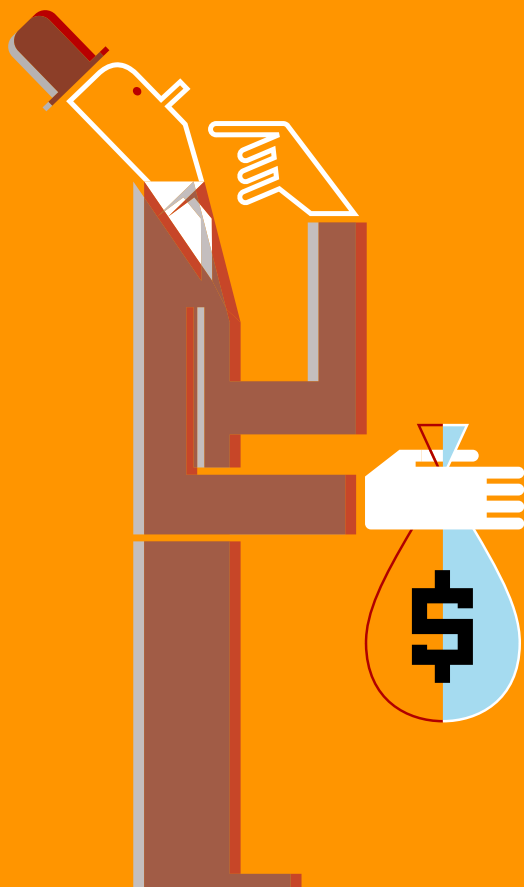
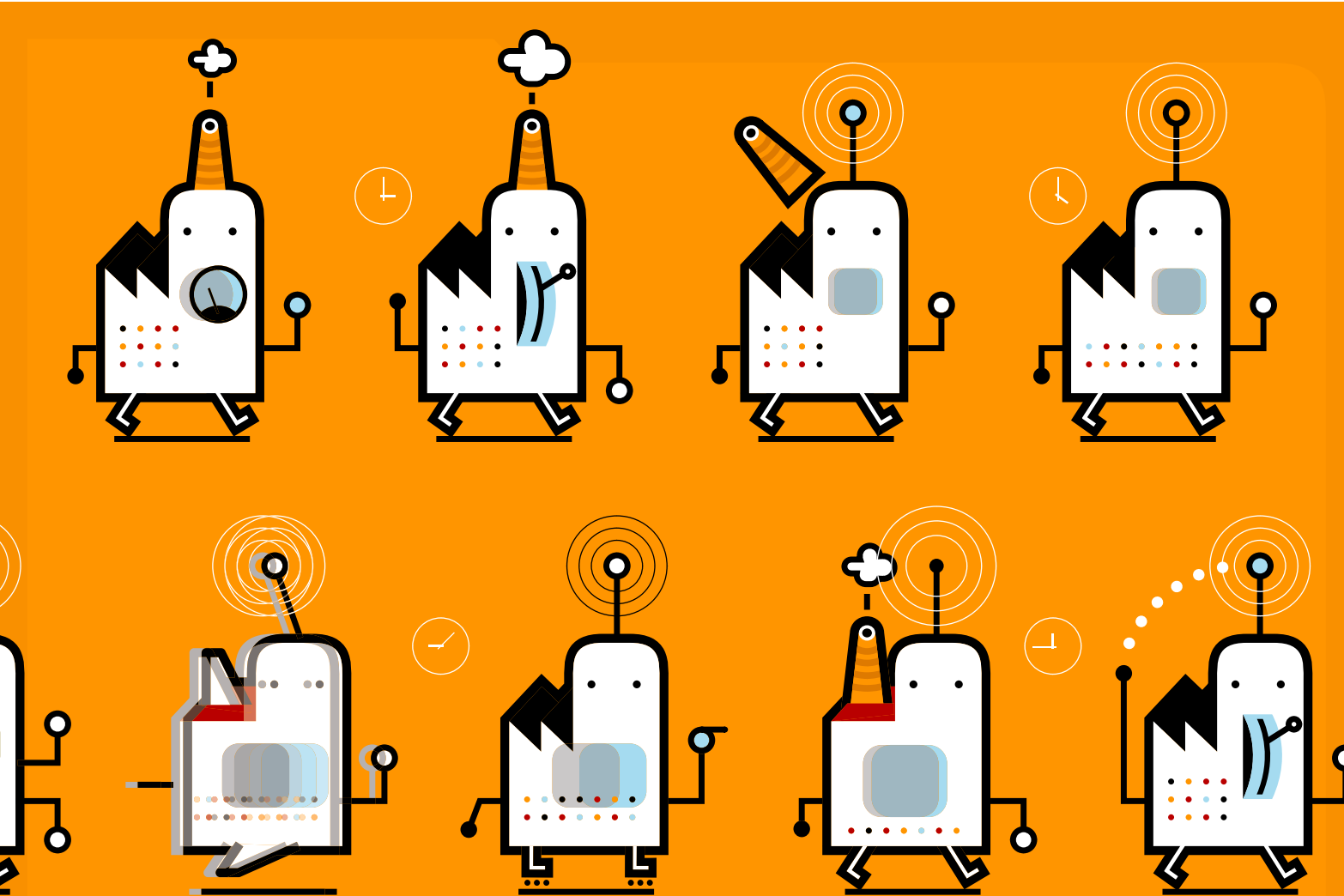
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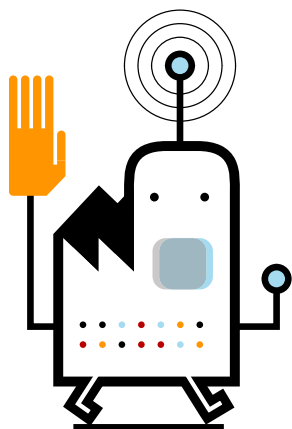
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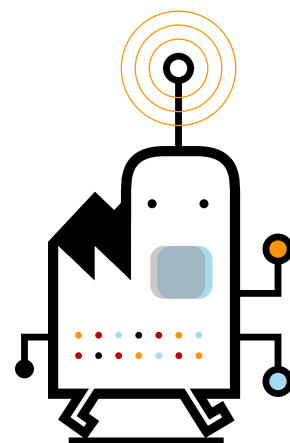


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Industries follow distinctive change trajectories.
Investments in innovation are more likely to
pay off if you take those pathways into account.



HOW INDUSTRIES CHANGE

by Anita M. McGahan

YOU CAN'T MAKE INTELLIGENT INVESTMENTS within your organization unless you understand how your whole industry is changing. If the industry is in the midst of radical change, you'll eventually have to dismantle old businesses. If the industry is experiencing incremental change, you'll probably need to reinvest in your core. The need to understand change in your industry may seem obvious, but such knowledge is not always easy to come by. Companies misread clues and arrive at false conclusions all the time. Sotheby's, for example, invested in online auctions (its own Web site as well as a venture with Amazon) as if the Internet were just another channel; in truth, the new technology represented a fundamental shock to the industry's structure.

To truly understand where your industry is headed, you have to shut out the noise from the popular business press and the pressure of immediate competitive threats to take a longer-term look at the context in which you do business. That is what some of my colleagues and I did. The research described in this article is based on a high-level look at a variety of businesses from a broad cross section of U.S. industries. The research, which began in the early 1990s and continues today, originally focused on how industry structure affects business profitability and investor returns. This statistical analysis yielded several hypotheses about how industries evolve, which were then tested and refined in a series of case studies on industry structure, industry change, and competitive advantage.

The conclusion, which I'll oversimplify here for the sake of clarity, is that industries evolve along four distinct trajectories—radical, progressive, creative, and intermediating.¹ Moreover, a firm's strategy—its plan for achieving a return on invested capital—cannot succeed unless it is aligned with the industry's change trajectory. The four trajectories set boundaries on what will generate profits in a business. Many companies have incurred losses because they tried to innovate outside of those boundaries. One of the most famous examples is Xerox, which is legendary for its innovations and for its struggle to harvest profits from them. By the mid 1980s, the copier manufacturing industry had matured around a business model that emphasized creative “hit products.” Meanwhile, the personal computing industry was in its infancy, and even though Xerox PARC had pioneered PC inventions such as the graphical user interface and the mouse, the company

sets—the resources, knowledge, and brand capital that have historically made the organization unique. These are threatened if they fail to generate value as they once did. In the pharmaceutical industry, for instance, blockbuster drugs are constantly under threat as patents expire and new drugs are developed.

The exhibit “Trajectories of Industry Change” maps the relationships between these two threats and the following four change trajectories. *Radical* change occurs when an industry's core assets and core activities are both threatened with obsolescence. This trajectory is closest to the concept of disruptive change that Harvard's Clayton M. Christensen discusses. Under this scenario, the knowledge and brand capital built up in the industry erode, and so do customer and supplier relationships. During the 1980s and 1990s, an estimated 19% of U.S. industries went through some stage of radical change. A good example is

Industries evolve along four distinct trajectories—**radical, progressive, creative, and intermediating**—that set boundaries on what will generate profits in a business.

was unable to make inroads in this burgeoning industry that required an entirely new set of business activities.

No innovation strategy works for every company in every industry. But if you understand the nature of change in your industry, you can determine which strategies are likely to succeed and which will backfire.

Four Trajectories of Change

Before we look at the four trajectories of industry evolution in depth, it is worthwhile to recognize that they are defined by two types of threats of obsolescence. The first is a threat to the industry's core activities—the activities that have historically generated profits for the industry. These are threatened when they become less relevant to suppliers and customers because of some new, outside alternative. In the auto industry, for example, many dealerships are finding that their traditional sales activities are less valued by consumers, who are going online for data on the characteristics, performance, and prices of the cars they want. The second is a threat to the industry's core as-

the travel business. Agencies' core activities and core assets came under fire as the airlines implemented systems to enhance direct price competition (such as SABRE and other reservations systems) and as the agencies' clients turned to Web-enabled systems (such as Expedia, Orbitz, and Travelocity) that offered new value (online monitoring of available flights and fares, for instance).

When neither core assets nor core activities are threatened, the industry's change trajectory is *progressive*. Over the past 20 years, this has been by far the most common trajectory; about 43% of U.S. industries were changing progressively, including long-haul trucking and commercial airlines. In those industries, the basic assets, activities, and underlying technologies remained stable. Innovators like Yellow Roadway, Southwest, and JetBlue succeeded not because the incumbents' strengths became obsolete but because the upstart firms had smart insights about how to optimize efficiency.

The other two change trajectories—*creative* and *intermediating*—have been neglected in the management literature, possibly because of their nuances. Creative change occurs when core assets are under threat but core activities are stable. This means that companies must continually find ways to restore their assets while protecting ongoing customer and supplier relationships; think of movie studios churning out new films or oil companies mining for new wells. About 6% of all U.S. industries are on a creative change trajectory.

Intermediating change occurs when core activities are threatened with obsolescence—customer and supplier re-

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relationships are stretched and fragile – while core assets retain their capacity to create value. Sotheby's, for instance, is as good as it ever was at assessing fine works of art, but, because of the technology that made eBay possible, the auction house's matchmaking activity no longer creates as much value. The challenge under intermediating change is to find ways to preserve knowledge, brand capital, and other valuable assets while fundamentally changing relationships with customers and with suppliers. During the 1980s and 1990s, approximately 32% of U.S. industries went through some form of intermediating change.

Radical Change

Radical transformation occurs when both core activities and core assets are threatened with obsolescence. The relevance of an industry's established capabilities and resources is diminished by some outside alternative; relationships with buyers and suppliers come under attack; and companies are eventually thrown into crisis. Radical industry evolution is relatively unusual. It normally occurs following the mass introduction of some new technology. It can also happen when there are regulatory changes (as in the long-haul, trunk-route airline industry of the 1970s, for example) or simply because of changes in taste (U.S. consumers' retreat from cigarettes over the past 20 years, for instance).

An industry on a radical change trajectory is entirely transformed – but not overnight. It usually takes decades for change to become clear and play out. The end result is a completely reconfigured – usually diminished – industry. The overnight letter-delivery business is currently in the early phases of a radical transformation that began about ten years ago. As Internet usage has become more prevalent, e-mail (especially securely encrypted e-mail) has loomed as a threat to this industry. Yet the volume of overnight letters is increasing; business is still thriving, because the threat is still in its infancy.

That is part of the good news associated with radical transformation: Industries that are on a radical change trajectory often remain profitable for a long time, especially if the companies in these industries scale back their commitments accordingly. Businesses also have time to develop strategic options that can be exercised in the future if they recognize the trajectory they are on early enough. For example, Federal Express's acquisition of Kinko's will help FedEx create deeper relationships with small and midsize businesses that need document storage, management, and dissemination services.

The only reasonable approach to radical change is to focus on the endgame and its implications for your company's current strategy. Exiting isn't the sole option; sometimes a few survivors can sustain profitable positions after others leave the industry. The computer mainframe busi-

ness, for example, is still quite large despite the threat from PC and workstation manufacturers.

To consider the best strategy when your industry is on a radical change trajectory, look at your productivity figures, the pace and timing of the transition in the industry, and buyers' switching costs. Early-moving companies might employ a staggered strategy – pursuing incremental improvements to established businesses' activities and conducting selective experiments in developing new assets. That is how encyclopedia companies responded to the radical threat that online search engines posed: They experimented with new electronic products and services while creating new distribution channels, marketing their existing products aggressively, and updating their inventory management systems.

Historically, many organizations confronted with radical change in their industries have abandoned their established positions and moved into emerging lines of business – incurring enormous risk in the process. Several typewriter makers, for instance, attempted to enter the PC manufacturing business only to cut short their efforts as the demands of the emerging industry became clearer. (IBM succeeded with this strategy, but its success in the PC industry was closely related to its experience in other areas of computing.) The alternative – reinvesting in the established industry – is also risky because it commits the firm to an approach that may become unprofitable. Companies dealing with radical transformation must accept the inevitability of the change and chart a course that maximizes returns without accelerating commitment to the troubled business – much easier said than done.

Intermediating Change

Intermediating change is more common than radical industry evolution. It typically occurs when buyers and suppliers have new options because they have gained unprecedented access to information. The core activities of industries on an intermediating change trajectory are threatened. But the core assets of these industries – knowledge, brand capital, patents, or even specialized factory equipment – retain most of their value if they are used in new ways. In effect, industries are on an intermediating change trajectory when their business activities for dealing in both downstream and upstream markets are simultaneously threatened. Intermediating change is occurring in auto dealerships, for example, for a number of reasons. First, traditional auto sales activities are becoming less relevant because of the Internet and because vehicles now last so long that consumers buy cars less frequently. Second, car manufacturers are seeking closer relationships with drivers and, as a result, are starting to share the management of customer relations with their dealers; in some cases, they're trying to take over customer relations completely. Finally, individual dealers are

losing control of inventory management as IT and sophisticated financing create economies of scope that can be exploited only by larger, integrated companies.

Managing a company in an industry that is experiencing intermediating change is extraordinarily difficult. Of all the change trajectories described in this article, this one is perhaps the most challenging because companies must simultaneously preserve their valuable assets and restructure their key relationships.

Executives tend to underestimate the threat to their core activities by assuming that longtime customers are still satisfied and that old supplier relationships are still relevant. In reality, these relationships have probably become fragile. The value of core assets often escalates, which compounds managers' confusion. For example, auction houses initially had a flurry of heightened interest in their accumulated appraisal experience because eBay had created so much excitement about auctioning.

During periods of intermediating change, pressure in the industry tends to build until it hits a breaking point, and then relationships break down dramatically only to be temporarily reconstituted until the cycle is repeated. Consider large brokerage firms. They had long confronted criticism about conflicts of interest in their analyst organizations. But the straws that broke the camel's back were the recent market downturn and accounting scandals – both of which were tied to fundamental changes in the information available to investors and companies seeking

investment capital. The core assets in investment brokerage – including the systems for evaluating securities and for processing trades – retained their value, yet old relationships no longer offered the same opportunities to generate profits.

Companies facing intermediating change must find unconventional ways to extract value from their core resources. They may diversify by entering a new business or even a new industry. Or they may sell off assets or services to former competitors. In the music industry, for instance, recording companies are beginning to sell their services à la carte to aspiring musicians rather than make huge investments in the artists up front and incur all the costs of artist development (radio promotions, choreography, and image management, among other expenses). The customer and the activities have changed, but the core resource – the recording companies' ability to develop new artists – retains its value. In another example, some traditional auctioneers, threatened by eBay, have capitalized on their appraisal expertise online; for a fee, they will certify the value of the wares being exchanged on the Internet. By reconfiguring old assets in new ways, these companies are dealing effectively with intermediation.

Initial returns under this change trajectory may be relatively high and then drop dramatically only to recover temporarily. The recording companies' profits, for example, have been volatile as the companies adapt to intermediation with varying levels of success. A plateau in per-

Trajectories of Industry Change

When determining which type of change your industry is going through – and, no doubt, it is going through some type of transformation – you need to consider whether there are threats to your industry's **core activities** (the recurring actions your company performs that attract and retain suppliers and buyers) and to your industry's **core assets** (the durable resources, including intangibles, that make your company more efficient at performing core activities).

		Core activities	
		Threatened	Not Threatened
Core assets	Threatened	Radical Change <i>Everything is up in the air.</i> Examples: makers of landline telephone handsets, overnight letter-delivery carriers, and travel agencies	Creative Change <i>The industry is constantly redeveloping assets and resources.</i> Examples: the motion picture industry, sports team ownership, and investment banking
	Not Threatened	Intermediating Change <i>Relationships are fragile.</i> Examples: automobile dealerships, investment brokerages, and auction houses	Progressive Change <i>Companies implement incremental testing and adapt to feedback.</i> Examples: online auctions, commercial airlines, and long-haul trucking

formance can create the illusion that reinvestment in the business as usual is a good idea. But organizations that recognize the trajectory their industry is on can turn relatively calm periods into opportunities for strategic transformation.

Creative Change

In industries on a creative change trajectory, relationships with customers and suppliers are generally stable, but assets turn over constantly. The film production industry is a good example. Larger production companies enjoy ongoing relationships with actors, agents, theater owners, and cable television executives. Within this network, they produce and distribute new films all the time. This combination of unstable assets (new films) and stable relationships (with buyers and suppliers) makes it possible to deliver superior performance over the long term. Indeed, the top companies in creative change industries usually retain their standing for long periods.

Other industries evolving on creative trajectories include pharmaceuticals, oil and gas exploration, and prepackaged software. In pharmaceuticals, companies research, develop, and test new drugs and then use their administrative and marketing skills to commercialize them. In oil and gas exploration, companies manage their portfolios of exploration ventures and maintain relationships with refineries and distributors. In the prepackaged

software industry, developers create and test multiple applications in the hopes that one or more will become a killer app. By applying well-honed user-testing and marketing skills, the industry leaders perpetuate their success.

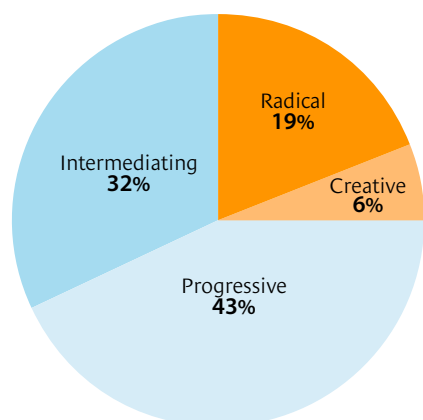
The creative change trajectory, like the intermediating trajectory, has not been studied extensively. It is easy to mistake it for radical change, despite the stability of relationships within the network. When this mistake is made, companies can overreact and neglect important relationships that are critical to their profitability. For example, some pharmaceutical companies became so focused on emerging methods of drug discovery that they invested capital exclusively in new research relationships and did not develop appropriate sales forces in new markets.

Innovation under creative change occurs in fits and starts. Although there are several long-standing formulas for making hit movies, for example, occasionally a new genre or technical approach to filmmaking emerges. Similarly, companies in the pharmaceutical industry have been experimenting with new methods of drug discovery over the last 15 years. Despite these changes, the companies that lead these industries are not new entrants. They have retained their strength by capitalizing on their networks of relationships.

There are many ways for companies in an industry on a creative change trajectory to generate strong returns on invested capital. For instance, the leading companies in these industries tend to spread the risk of new-project development over a portfolio of initiatives. As a result, their returns are less volatile than those of smaller competitors. Other tactics include outsourcing project management and development tasks.

A Fair Share?

The four change trajectories are not at all evenly distributed among industries. Surprisingly, given the time and attention much of the management literature devotes to it, radical change affects less than one-fifth of all industries. More prevalent are progressive and intermediating change. The percentages shown are estimates of the distribution of change trajectories among U.S. industries between 1980 and 1999, based on variability in revenues and assets among large firms.



Progressive Change

Progressive evolution is like creative evolution in that buyers, suppliers, and the industry's incumbents have incentives to preserve the status quo. The difference is that core assets are not threatened with obsolescence under progressive change, so industries on this trajectory are more stable than those on a creative change trajectory. Today's discount retailing, long-haul trucking, and commercial airline industries are evolving in this way.

Progressive evolution is most similar to the kind of change that Christensen refers to as "sustaining." Progress occurs, and technology can have an enormous impact, but it happens within the existing framework of the business. Core resources tend to appreciate rather than depreciate over time. Progressive change doesn't mean that change is minor or even that it is slow. Over time, incremental changes can lead to major improvements and major changes. Think of what has happened in discount retailing over the last ten years. Wal-Mart's cumulative impact has been extraordinary, and the company has developed unprecedented clout. But the retailer developed

that advantage by deepening existing customer and supplier relationships, not by seeking out entirely new ones.

The most profitable corporate strategies in progressive change industries generally involve carving out distinct positions based on geographic, technical, or marketing expertise. The goal is to build resources and capabilities steadily and incrementally. Companies rarely get into brinkmanship or eyeball-to-eyeball competition, and they don't have to put large amounts of capital at risk before learning whether an innovation creates value. Instead, their performance depends on their quick responses to feedback. Southwest Airlines, for instance, tests new flight routes but isn't afraid to pull out if a route ultimately doesn't work under the company's approach to air travel.

Successful companies in progressive change industries tend to be viewed by the financial community as minimally risky with the potential for only moderate returns. Over the long run, though, these companies can actually create very large total returns for investors. *Money* has reported that the two companies that had generated the greatest total return to shareholders during the magazine's 25-year history were none other than Wal-Mart and Southwest.

Which Trajectory Are You On?

Identifying your industry's evolutionary trajectory on the fly is difficult. It is easy to become distracted or confused by conventional wisdom, customer demands, and competitors' moves. To ensure accuracy, your analysis must be focused and systematic.

The first step is to define your industry. You can begin by identifying the companies in your industry that share common buyers and suppliers. Many economists use a 5% rule to assess whether the commonality is sufficient to qualify the firms as direct competitors: If a 5% price fluctuation by one company causes customers or suppliers to switch to another company, the businesses qualify as direct competitors. When a group of companies intend to appeal to the same buyers and rely on the same suppliers, you have additional evidence that they are direct competitors. And when companies use similar technologies to create value, it is likely that they qualify as direct competitors.

The second step is to define the industry's core assets and activities. Here is an easy way to test whether something is core: If it were eradicated today, would profits be lower a year from now, despite efforts to work around what's missing? If the answer is yes, then it definitely qualifies. In the auctioneering industry, for example, the capacity to evaluate works of art is a core activity. In the soft-drink industry, Coca-Cola's brand is a core asset. The disappearance of either of these capabilities would seriously damage profitability in their respective industries.

The third step is to determine whether the core assets and activities are threatened with obsolescence. To qual-

ify, the threat must make core assets and activities potentially irrelevant to profitability. It must be significant enough to jeopardize the survival of at least one industry leader and widespread enough to influence every company in the industry. Once you know whether core activities and assets are threatened, you can identify which of the four trajectories applies to the industry you are studying.

The final step in the diagnosis is to evaluate the phase of the evolutionary trajectory. This step is important: Industry change generally takes place over a long period, and the options for dealing with change typically drop off sharply through each phase. (See the sidebar "The Industry Life Cycle Revisited.")

It is also essential to note that an industry generally evolves along just one trajectory at a time. It almost always starts out on either a progressive or creative trajectory because, collectively, companies in the industry can't capture value without a clear model for organizing their core activities. Over time, the industry may feel pressure to change these activities – driven by, for example, customer demands and new technologies. The threat of obsolescence can catapult the industry on to either a radical or an intermediating trajectory. As the industry restructures its core activities and assets, the threat of obsolescence may fade, marking the industry's transition back to a progressive or creative trajectory. A company that has survived these transitions can sometimes retain profitability, although it almost always must operate at a smaller scale and with a very different approach.

Industries do not shift their trajectories very often; no industry that I have studied has shifted between evolutionary paths more than once in ten years. So it is a good bet that a given industry has been on a single evolutionary trajectory for at least a few years. And while it is sometimes possible for individual companies to influence the trajectory of an entire industry, the effort required is almost always too great to be worthwhile, and failure can be devastating to the company's profitability or even its survival.

Capitalizing on Industry Evolution

Understanding industry change can do more than help you avoid mistakes. The rules under each trajectory can help you forecast early on how change will occur in your industry – and help you determine how to exploit change as it occurs. It would be impossible to list here all the possible contingencies for change on each trajectory and at each stage. But here are a few general insights:

Analyzing Radical and Intermediating Change. As noted earlier, companies operating in an industry that is on a radical or intermediating change trajectory must perform a balancing act – aggressively pursuing profits in the near term while avoiding investments that could later prevent them from ramping down their commitments. To

The Industry Life Cycle Revisited

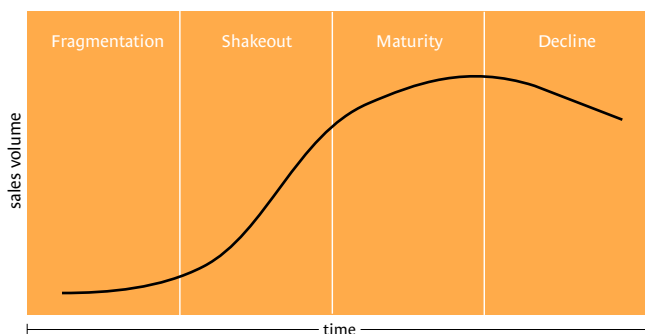
Once you've determined which change trajectory your industry is on, you'll need to figure out which phase of change the industry is experiencing. The classic industry life cycle model is relevant for understanding the phases of progressive and creative change. But this model does not apply to industries that are experiencing radical or intermediating change.

In the traditional life cycle model, industries begin in a period of *fragmentation* as companies experiment with different approaches to a market. The companies offer a variety of products and operate at low volumes. They tend to be entrepreneurial, private, and focused on serving narrow geographic areas. Over time, the industry experiences a *shakeout*, usually because a specific business model achieves greater legitimacy than any other. Competitors become more efficient, the volume of sales increases, and the industry generates unprecedented value for suppliers and buyers. When industries reach *maturity*, sales growth slows, and leaders often lock their positions. As the volume of sales drops, industries move into *decline*. In this phase, companies often search for incremental improvements in efficiency to recover profitability. (See "The Traditional Model" below.)

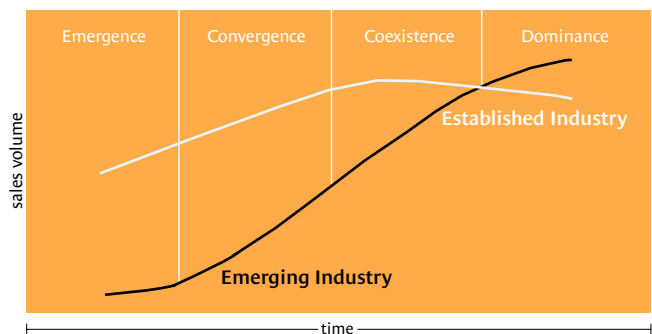
But if you apply this model in industries that are experiencing radical or intermediating change, you may end up trying to renew your position in an industry that will no longer generate significant returns. Or you may end up missing opportunities in both the established and emerging industries.

A more accurate model for those on radical or intermediating trajectories is the one below, which reflects changes in the ways buyers and suppliers respond to the level of the threat of obsolescence. (See "An Alternate Model.") During an initial period of *emergence*, upstart firms warrant attention but may not be significant enough to prompt established companies to restructure. As the new approach *converges* in volume, established companies may react by reconfiguring some of their activities. During a period of *coexistence*, buyers and suppliers become increasingly sophisticated at evaluating the new approach, and as a result, new opportunities for value creation may emerge even in the old industry. During a final phase of *dominance*, the industry's products and services are evaluated on new criteria that reflect the popularity of the new approach.

The Traditional Model



An Alternate Model



get the right balance, put yourself in the suppliers' shoes as well as in those of the buyers. What new options are emerging?

Take the example of auto dealerships, which are on an intermediating change trajectory. They are locked into multiyear pacts with the manufacturers, their suppliers. Yet the intermediation of the dealers presents new opportunities for the automakers to relate to consumers: What are the trade-offs for the manufacturers if they advertise collaboratively with the dealerships rather than directly to consumers? How can the carmakers pull off something like this without violating their contracts with the dealers? Only with unconventional thinking – beyond stan-

dard market research and advertising plans—can the manufacturers find answers to these questions.

Radical and intermediating change also call for new ways of dealing with competitive threats. Instead of viewing rivals in conventional terms, consider whether you can use alliances to protect common interests and defend against new competition from outsiders – or to facilitate consolidation. When some regions of the U.S. became overcrowded with auto dealerships, affiliated car lots (Honda dealers in adjacent towns, for instance) merged.

Under radical and intermediating change, it is also important to interpret conflict within your organization in a new way. "Civil wars" can emerge within an organization

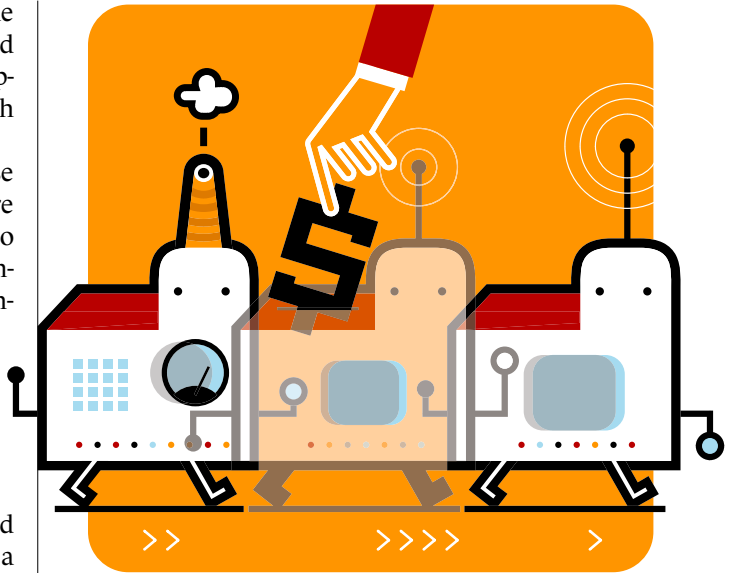
as divisions with exposure to different segments of the business develop opposing views about the nature and pace of change. It is uncanny how frequently this happens. Strong, central leadership is required to deal with the problem effectively.

Surviving Radical and Creative Change. Under these conditions, it is smart to evaluate how quickly your core assets are depreciating. The easiest way to do this is to identify how much you are spending to renew them. Investing in a full-blown cost-accounting effort is worthwhile since the value of your assets may vary across different segments of the business in surprising ways. The goal of this analysis should be to distinguish the segments in which you can protect your competitive position from those in which your position will erode quickly. Often, this assessment yields important information about the value of intellectual property and how it can be guarded more intensively. For example, a film studio might discover that, in some geographies, losses from video piracy outweigh the potential profits from distributing content, at retail, on videotape or DVD.

To navigate radical and creative change trajectories successfully, companies must have the mettle to disappoint some buyers and suppliers, regardless of their track records, if the risks are too high. Despite Marlon Brando's box-office successes during the 1950s, film studios were reluctant to work with him because of his personal idiosyncrasies. The stakes in developing new films are simply too great for producers to take many risks. Because of the volatility of new-asset development, it is also crucial to cultivate relationships with investors to ensure quick access to capital when a worthwhile project comes around.

Managing Progressive Change. Progressive change is not simple to manage, despite the fact that neither core assets nor core activities are threatened. The accumulated impact of incremental changes can raise the standards for doing business to the point where only a handful of companies are competitive. For example, the standard-bearers in discount retailing (Wal-Mart and Target among them) have relentlessly managed incremental changes in activities for decades. As a result, only a few national retailers have competitive cost structures on a large scale. Ultimately, one of the most successful strategies for companies in industries on a progressive change trajectory is to develop a system of interrelated activities that are defensible because of their compounding effects on profits, not because they are hard to understand or replicate. Consider that very little about Wal-Mart's approach is secret. The company's efficiencies have accumulated ever since Sam Walton built his first distribution centers decades ago.

Adapting to the Stages of Change. As we've noted, all four trajectories typically unfold over decades, which means organizations have time to outline strategic options for the future. As change happens, fighting it is almost always too costly to be worthwhile. In the late



stages, companies invite trouble by sticking with outdated budget systems and cost-accounting processes. Organizations must reconfigure themselves for lower revenue growth and develop the ability to move activities and resources out of the business.

Diversifying Your Business. Some of the most exciting opportunities associated with industry evolution relate to diversification across industries. By participating in more than one industry on a progressive trajectory, Wal-Mart has enhanced the effects of its powerful distribution systems. And with its acquisition of Kinko's, FedEx has diversified in response to radical change. Some of the major challenges of diversification have to do with sharing core activities and core assets across divisions on different trajectories, and developing clear lines of authority for resolving disputes between divisions as their industries create different investment requirements. It is virtually impossible to diversify profitably without understanding the differences in the trajectories and phases of industry change.

...

The trajectories outlined above can help you anticipate how change will unfold in your industry—and how to take advantage of opportunities as they emerge. To get out from under industry threats, your company must cultivate a deep understanding of how changes to the industry will unfold over time. How will buyer and seller relationships be affected? And are intangible assets like brand capital and knowledge capital truly adaptable across industries? The work of systematically analyzing the business environment is not easy, but the payoff is great: better strategic decision-making for your company. 

1. This article builds on the author's "How Industries Evolve," *Business Strategy Review*, Autumn 2000.

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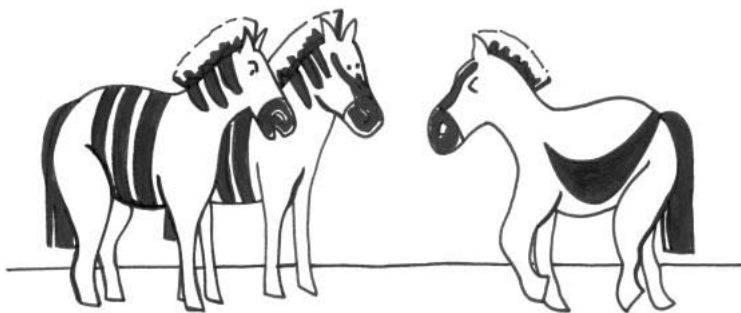
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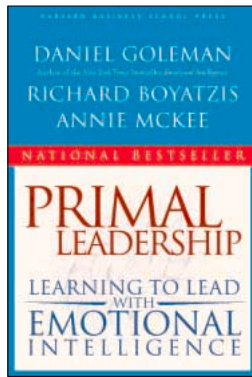
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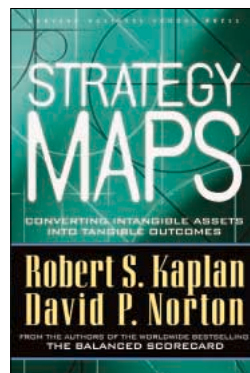
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THE 21st CENTURY SUPPLY CHAIN

If Supply and Demand were streets, you would set up shop where they meet.

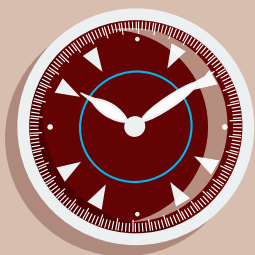
You would want to make sure that every customer who came through the door found what he wanted; at the same time, you would not want a cavernous stockroom full of slow-selling, slowly aging merchandise. Managing that balance—between maximum availability and minimum inventory—is one of a handful of truly critical factors in the success of a business.

Managing the modern supply chain is a job that involves specialists in manufacturing, purchasing, and distribution, of course; but today it is also vital to the work of chief financial officers, chief information officers, operations and customer service executives, and, certainly, chief executives. Changes in supply chain management have been truly revolutionary, and the pace of progress shows no sign of moderating. In our increasingly interconnected and interdependent global economy, the process of delivering supplies and finished goods (and information and other business services) from one place to another is accomplished by means of mind-boggling technological innovations, clever new applications of old ideas, seemingly magical mathematics, powerful software, and old-fashioned concrete, steel, and muscle.

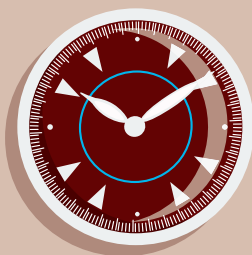
The corner of Supply and Demand is also where today's most controversial strategy and organizational challenges converge. When companies reconfigure their supply networks, the result is often outsourcing and offshoring. The globalization of corporations has been driven as much by companies' attempts to de-

velop new sources of supply as by their searches for new sources of demand. Changes in supply chains are transforming the very design and structure of the corporation, along lines prophesied in several influential *Harvard Business Review* articles—Carliss Y. Baldwin and Kim B. Clark's "Managing in an Age of Modularity" (September–October 1997) and John Hagel III's "Leveraged Growth: Expanding Sales Without Sacrificing Profits" (October 2002).

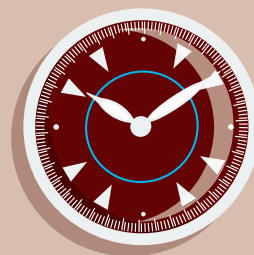
The end-to-end, top-to-bottom transformation of the twenty-first-century supply chain is shaping the agenda for senior managers now and will continue to do so for years to come. Beginning with this issue, *Harvard Business Review* will publish a series of six articles—two a month for three consecutive months—that examine how corporations' strategies and structures are changing and how that is manifest in their supply chains. On the following pages, you will find the first pair of articles. Stanford University's Hau L. Lee describes the attributes a great supply chain must have—agility, adaptability, and alignment—and how to recognize and develop them. Then Whirlpool's Reuben E. Slone tells a story of transformation: how his company went from supply chain laggard to supply chain leader. Articles in the months to come will present new research about how to manage incentives and commitments between supply chain partners, as well as in-depth case studies about several of the world's masters of the art and science of supply chain management.



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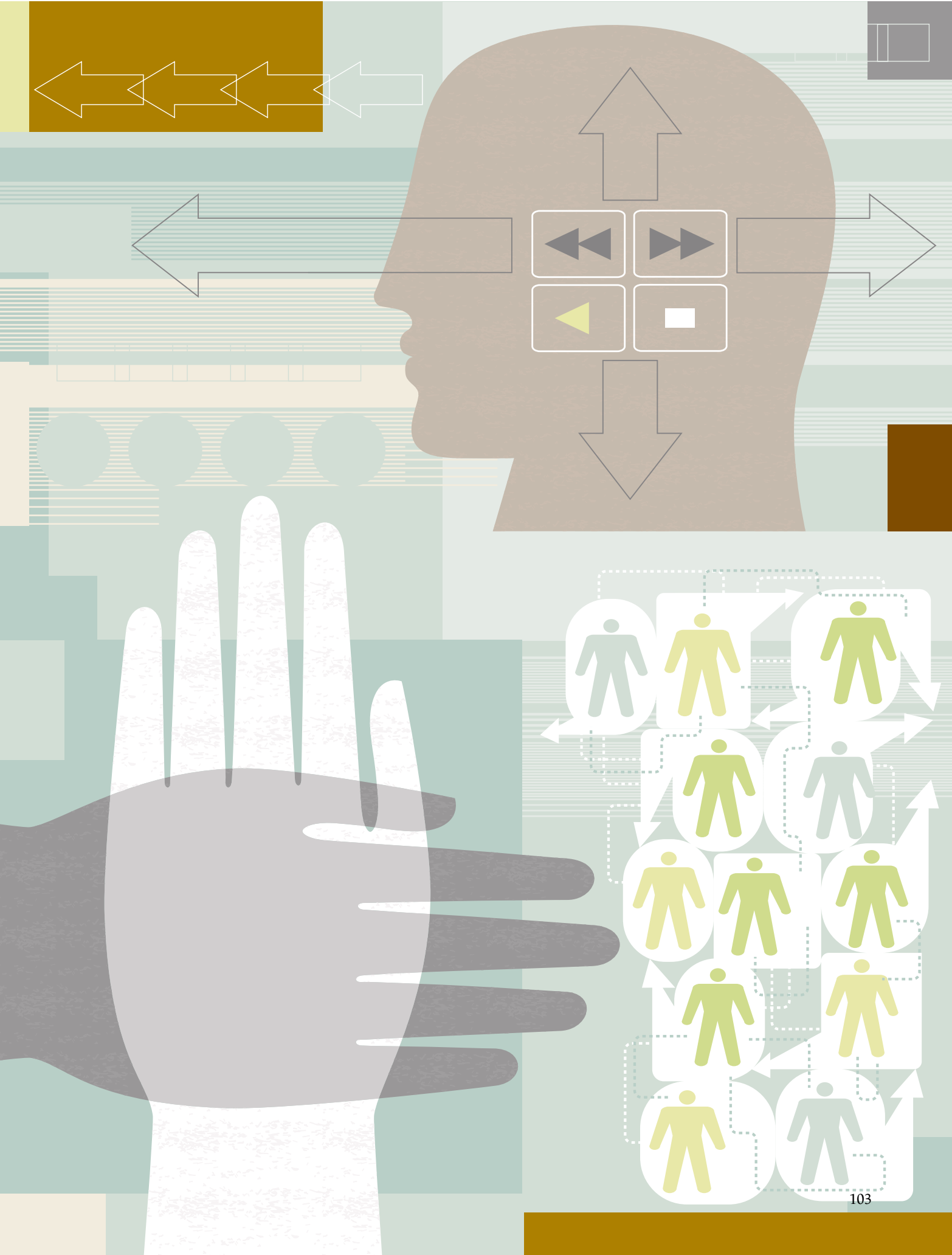
by **Hau L. Lee**

The Triple-A Supply Chain

During the past decade and a half, I've studied from the inside more than 60 leading companies that focused on building and rebuilding supply chains to deliver goods and services to consumers as quickly and inexpensively as possible. Those firms invested in state-of-the-art technologies, and when that proved to be inadequate, they hired top-notch talent to boost supply chain performance. Many companies also teamed up to streamline processes, lay down technical standards, and invest in infrastructure they could share. For instance, in the early 1990s, American apparel companies started a Quick Response initiative, grocery companies in Europe and the United States touted a program called Efficient Consumer Response, and the U.S. food service industry embarked on an Efficient Foodservice Response program.

All those companies and initiatives persistently aimed at greater speed and cost-effectiveness—the popular grails of supply chain management. Of course, companies' quests changed with the industrial cycle: When business was booming, executives concentrated on maximizing speed, and when the economy headed south, firms desperately tried to minimize supply costs.

As time went by, however, I observed one fundamental problem that most companies and experts seemed to ignore: *Ceteris paribus*, companies whose supply chains became more efficient and cost-effective didn't gain a sustainable advantage over their rivals. In fact, the performance of those supply chains steadily deteriorated. For instance, despite the increased efficiency of many companies' supply



chains, the percentage of products that were marked down in the United States rose from less than 10% in 1980 to more than 30% in 2000, and surveys show that consumer satisfaction with product availability fell sharply during the same period.

Evidently, it isn't by becoming more efficient that the supply chains of Wal-Mart, Dell, and Amazon have given those companies an edge over their competitors. According to my research, top-performing supply chains possess three very different qualities. First, great supply chains are agile. They react speedily to sudden changes in demand or supply. Second, they adapt over time as market structures and strategies evolve. Third, they align the interests of all the firms in the supply network so that companies optimize the chain's performance when they maximize their interests. Only supply chains that are agile, adaptable, and aligned provide companies with sustainable competitive advantage.

The Perils of Efficiency

Why haven't efficient supply chains been able to deliver the goods? For several reasons. High-speed, low-cost supply chains are unable to respond to unexpected changes in demand or supply. Many companies have centralized manufacturing and distribution facilities to generate scale economies, and they deliver only container loads of products to customers to minimize transportation time, freight costs, and the number of deliveries. When demand for a particular brand, pack size, or assortment rises without warning, these organizations are unable to react even if they have the items in stock. According to two studies I helped conduct in the 1990s, the required merchandise was often already in factory stockyards, packed and ready to ship, but it couldn't be moved until each container was full. That "best" practice delayed shipments by a week or more, forcing stocked-out stores to turn away consumers. No wonder then that, according to another recent research report, when companies announce product promotions, stock outs rise to 15%, on average, even when executives have primed supply chains to handle demand fluctuations.

When manufacturers eventually deliver additional merchandise, it results in excess inventory because most distributors don't need a container load to satisfy the increased demand. To get rid of the stockpile, companies mark down those products sooner than they had planned

to. That's partly why department stores sell as much as a third of their merchandise at discounted prices. Those markdowns not only reduce companies' profits but also erode brand equity and anger loyal customers who bought the items at full price in the recent past (sound familiar?).

Companies' obsession with speed and costs also causes supply chains to break down during the launch of new products. Some years ago, I studied a well-known consumer electronics firm that decided not to create a buffer stock before launching an innovative new product. It wanted to keep inventory costs low, particularly since it hadn't been able to generate an accurate demand forecast. When demand rose soon after the gizmo's launch and fell sharply thereafter, the company pressured vendors to boost production and then to slash output. When demand shot up again a few weeks later, executives enthusiastically told vendors to step up production once more. Five days later, supplies of the new product dried up as if someone had turned off a tap.

The shocked electronics giant discovered that vendors had been so busy ramping production up and down that they hadn't found time to fix bugs in both the components' manufacturing and the product's assembly processes. When the suppliers tried to boost output a second time, product defects rose to unacceptable levels, and some vendors, including the main assembler, had to shut down production lines for more than a week. By the time the suppliers could fix the glitches and restart production, the innovation was all but dead. If the electronics company had given suppliers a steady, higher-than-needed manufacturing schedule until both the line and demand had stabilized, it would have initially had higher inventory costs, but the product would still be around.

Efficient supply chains often become uncompetitive because they don't adapt to changes in the structures of markets. Consider Lucent's Electronic Switching Systems division, which set up a fast and cost-effective supply chain in the late 1980s by centralizing component procurement, assembly and testing, and order fulfillment in Oklahoma City. The supply chain worked brilliantly as long as most of the demand for digital switches emanated from the Americas and as long as Lucent's vendors were mostly in the United States. However, in the 1990s, when Asia became the world's fastest-growing market, Lucent's response times increased because it hadn't set up a plant in the Far East. Furthermore, the company couldn't customize switches or carry out modifications because of the

Hau L. Lee (haulee@stanford.edu) is the Thoma Professor of Operations, Information, and Technology at the Stanford Graduate School of Business in Stanford, California, and the codirector of the Stanford Global Supply Chain Management Forum. He is the coeditor (with Terry P. Harrison and John J. Neale) of The Practice of Supply Chain Management: Where Theory and Application Converge (Kluwer Academic Publishers, 2003).

amount of time and money it took the supply chain to do those things across continents.

Lucent's troubles deepened when vendors shifted manufacturing facilities from the United States to Asia to take advantage of the lower labor costs there. "We had to fly components from Asia to Oklahoma City and fly them back again to Asia as finished products. That was costly and time consuming," Lucent's then head of manufacturing told me. With tongue firmly in cheek, he added, "Neither components nor products earned frequent-flyer miles." When Lucent redesigned its supply chain in 1996 by setting up joint ventures in Taiwan and China to manufacture digital switches, it did manage to gain ground in Asia.

In this and many other cases, the conclusion would be the same: Supply chain efficiency is necessary, but it isn't enough to ensure that firms will do better than their rivals. Only those companies that build agile, adaptable, and aligned supply chains get ahead of the competition, as I pointed out earlier. In the following pages, I'll expand on each of those qualities and explain how companies can build them into supply chains without having to make trade-offs. In fact, I'll show that any two of these dimensions alone aren't enough. Only companies that build all three into supply chains become better faster than their rivals. I'll conclude by describing how Seven-Eleven Japan has become one of the world's most profitable retailers by building a truly "triple-A" supply chain.

Fostering Agility

Great companies create supply chains that respond to sudden and unexpected changes in markets. Agility is critical, because in most industries, both demand and supply fluctuate more rapidly and widely than they used to. Most supply chains cope by playing speed against costs, but agile ones respond both quickly and cost-efficiently.

Most companies continue to focus on the speed and costs of their supply chains without realizing that they pay a big price for disregarding agility. (See the sidebar "The Importance of Being Agile.") In the 1990s, whenever Intel unveiled new microprocessors, Compaq took more time than its rivals to launch the next generation of PCs because of a long design cycle. The company lost mind share because it could never count early adopters, who create the buzz around high-tech products, among its consumers. Worse, it was unable to compete on price. Because its products stayed in the pipeline for a long time, the company had a large inventory of raw materials. That meant Compaq didn't reap much benefit when component prices fell, and it couldn't cut PC prices as much as its rivals were able to. When vendors announced changes

Building the Triple-A Supply Chain

Agility

Objectives:

Respond to short-term changes in demand or supply quickly; handle external disruptions smoothly.

Methods:

- > Promote flow of information with suppliers and customers.
- > Develop collaborative relationships with suppliers.
- > Design for postponement.
- > Build inventory buffers by maintaining a stockpile of inexpensive but key components.
- > Have a dependable logistics system or partner.
- > Draw up contingency plans and develop crisis management teams.

Adaptability

Objectives:

Adjust supply chain's design to meet structural shifts in markets; modify supply network to strategies, products, and technologies.

Methods:

- > Monitor economies all over the world to spot new supply bases and markets.
- > Use intermediaries to develop fresh suppliers and logistics infrastructure.
- > Evaluate needs of ultimate consumers—not just immediate customers.
- > Create flexible product designs.
- > Determine where companies' products stand in terms of technology cycles and product life cycles.

Alignment

Objective:

Create incentives for better performance.

Methods:

- > Exchange information and knowledge freely with vendors and customers.
- > Lay down roles, tasks, and responsibilities clearly for suppliers and customers.
- > Equitably share risks, costs, and gains of improvement initiatives.

in engineering specifications, Compaq incurred more reworking costs than other manufacturers because of its larger work-in-progress inventory. The lack of an agile supply chain caused Compaq to lose PC market share throughout the decade.

By contrast, smart companies use agile supply chains to differentiate themselves from rivals. For instance, H&M, Mango, and Zara have become Europe's most profitable apparel brands by building agility into every link of their supply chains. At one end of their product pipelines, the three companies have created agile design processes. As soon as designers spot possible trends, they create sketches and order fabrics. That gives them a head start over competitors because fabric suppliers require the longest lead times. However, the companies finalize designs and manufacture garments only after they get reliable data from stores. That allows them to make products that meet consumer tastes and reduces the number of items they must sell at a discount. At the other end of the pipeline, all three companies have superefficient distribution centers. They use state-of-the-art sorting and material-handling technologies to ensure that distribution doesn't become a bottleneck when they must respond to demand fluctuations. H&M, Mango, and Zara have all grown at more than 20% annually since 1990, and their double-digit net profit margins are the envy of the industry.

Agility has become more critical in the past few years because sudden shocks to supply chains have become frequent. The terrorist attack in New York in 2001, the dockworkers' strike in California in 2002, and the SARS epidemic in Asia in 2003, for instance, disrupted many companies' supply chains. While the threat from natural disasters, terrorism, wars, epidemics, and computer viruses has intensified in recent years, partly because supply lines now traverse the globe, my research shows that most supply chains are incapable of coping with emergencies. Only three years have passed since 9/11, but U.S. companies have all but forgotten the importance of drawing up contingency plans for times of crisis.

Without a doubt, agile supply chains recover quickly from sudden setbacks. In September 1999, an earthquake in Taiwan delayed shipments of computer components to the United States by weeks and, in some cases, by months. Most PC manufacturers, such as Compaq, Apple, and Gateway, couldn't deliver products to customers on time and incurred their wrath. One exception was Dell, which changed the prices of PC configurations overnight. That allowed the company to steer consumer demand away from hardware built with components that weren't available toward machines that didn't use those parts. Dell could do that because it got data on the earthquake damage early, sized up the extent of vendors' problems quickly,

The Importance of Being Agile

Most companies overlook the idea that supply chains should be agile. That's understandable; adaptability and alignment are more novel concepts than agility is. However, even if your supply chain is both adaptable and aligned, it's dangerous to disregard agility.

In 1995, Hewlett-Packard teamed up with Canon to design and launch ink-jet printers. At the outset, the American company aligned its interests with those of its Japanese partner. While HP took on the responsibility of producing printed circuit boards (or "formatters"), Canon agreed to manufacture engines for the LaserJet series. That was an equitable division of responsibilities, and the two R&D teams learned to work together closely. After launching the LaserJet, HP and Canon quickly adapted the supply network to the product's markets. HP used its manufacturing facilities in Idaho and Italy to support the LaserJet, and Canon used plants in West Virginia and Tokyo.

But HP and Canon failed to anticipate one problem. To keep costs down, Canon agreed to alter the number of engines it produced, but only if HP communicated changes well in advance—say, six or more months before printers entered the market. However, HP could estimate demand accurately only three or fewer months before printers hit the market. At that stage, Canon could modify its manufacturing schedule by just a few percentage points. As a result, the supply chain couldn't cope with sudden fluctuations in demand. So when there was an unexpected drop in demand for the LaserJet III toward the end of its life cycle, HP was stuck with a huge and expensive surplus of printer engines: the infamous LaserJet mountain. Having an adaptable and aligned supply chain didn't help HP overcome its lack of agility.

and implemented the plans it had drawn up to cope with such eventualities immediately. Not surprisingly, Dell gained market share in the earthquake's aftermath.

Nokia and Ericsson provided a study in contrasts when in March 2000, a Philips facility in Albuquerque, New Mexico, went up in flames. The plant made radio frequency (RF) chips, key components for mobile telephones, for both Scandinavian companies. When the fire damaged the plant, Nokia's managers quickly carried out

design changes so that other companies could manufacture similar RF chips and contacted backup sources. Two suppliers, one in Japan and another in the United States, asked for just five days' lead time to respond to Nokia. Ericsson, meanwhile, had been weeding out backup suppliers because it wanted to trim costs. It didn't have a plan B in place and was unable to find new chip suppliers. Not only did Ericsson have to scale back production for months after the fire, but it also had to delay the launch of a major new product. The bottom line: Nokia stole market share from Ericsson because it had a more agile supply chain.

Companies can build agility into supply chains by adhering to six rules of thumb:

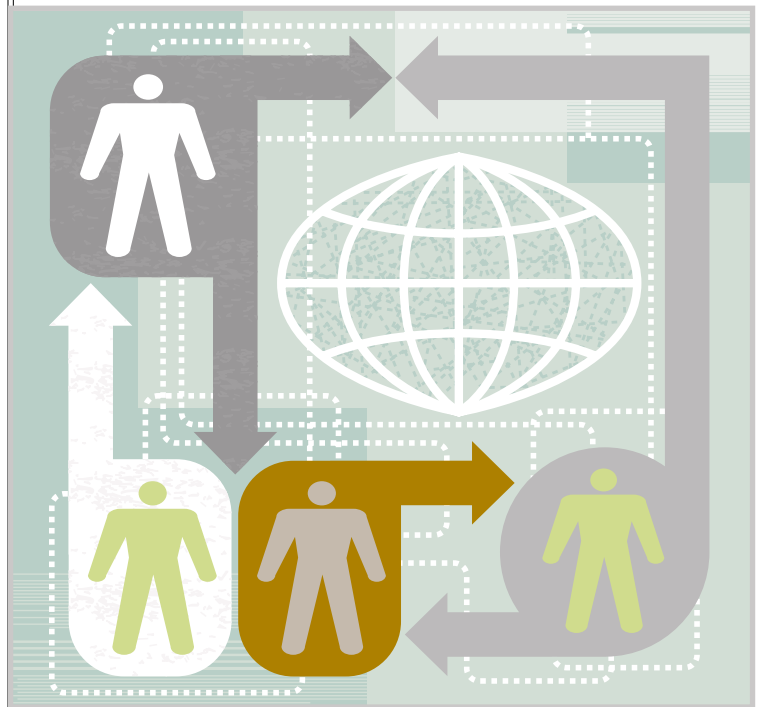
- Provide data on changes in supply and demand to partners continuously so they can respond quickly. For instance, Cisco recently created an e-hub, which connects suppliers and the company via the Internet. This allows all the firms to have the same demand and supply data at the same time, to spot changes in demand or supply problems immediately, and to respond in a concerted fashion. Ensuring that there are no information delays is the first step in creating an agile supply chain.

- Develop collaborative relationships with suppliers and customers so that companies work together to design or redesign processes, components, and products as well as to prepare backup plans. For instance, Taiwan Semiconductor Manufacturing Company (TSMC), the world's largest semiconductor foundry, gives suppliers and customers proprietary tools, data, and models so they can execute design and engineering changes quickly and accurately.

- Design products so that they share common parts and processes initially and differ substantially only by the end of the production process. I call this strategy "postponement." (See the 1997 HBR article I coauthored with Edward Feitzinger, "Mass Customization at Hewlett-Packard: The Power of Postponement.") This is often the best way to respond quickly to demand fluctuations because it allows firms to finish products only when they have accurate information on consumer preferences. Xilinx, the world's largest maker of programmable logic chips, has perfected the art of postponement. Customers can program the company's integrated circuits via the Internet for different applications after purchasing the basic product. Xilinx rarely runs into inventory problems as a result.

- Keep a small inventory of inexpensive, nonbulky components that are often the cause of bottlenecks. For example, apparel manufacturers H&M, Mango, and Zara maintain supplies of accessories such as decorative buttons, zippers, hooks, and snaps so that they can finish clothes even if supply chains break down.

- Build a dependable logistics system that can enable your company to regroup quickly in response to unex-



pected needs. Companies don't need to invest in logistics systems themselves to reap this benefit; they can strike alliances with third-party logistics providers.

- Put together a team that knows how to invoke backup plans. Of course, that's only possible only if companies have trained managers and prepared contingency plans to tackle crises, as Dell and Nokia demonstrated.

Adapting Your Supply Chain

Great companies don't stick to the same supply networks when markets or strategies change. Rather, such organizations keep adapting their supply chains so they can adjust to changing needs. Adaptation can be tough, but it's critical in developing a supply chain that delivers a sustainable advantage.

Most companies don't realize that in addition to unexpected changes in supply and demand, supply chains also face near-permanent changes in markets. Those structural shifts usually occur because of economic progress, political and social change, demographic trends, and technological advances. Unless companies adapt their supply chains, they won't stay competitive for very long. Lucent twice woke up late to industry shifts, first to the rise of the Asian market and later to the advantages of outsourced manufacturing. (See the sidebar "Adaptation of the Fittest.") Lucent recovered the first time, but the second time around, the company lost its leadership of

Adaptation of the Fittest

Many executives ask me, with a twinkle in their eye, if companies must really keep adapting supply chains. Companies may find it tough to accept the idea that they have to keep changing, but they really have no choice.

Just ask Lucent. In the mid-1990s, when the American telecommunications giant realized that it could make inroads in Asia only if it had local manufacturing facilities, it overhauled its supply chain. Lucent set up plants in Taiwan and China, which allowed the company to customize switches as inexpensively and quickly as rivals Siemens and Alcatel could. To align the interests of parent and subsidiaries, Lucent executives stopped charging the Asian ventures inflated prices for modules that the company shipped from the United States. By the late 1990s, Lucent had recaptured market share in China, Taiwan, India, and Indonesia.

Unhappily, the story doesn't end there, because Lucent stopped adapting its supply chain. The company didn't realize that many medium-sized manufacturers had developed the technology and expertise to produce components and subassemblies for digital switches and that because of economies of scale, they could do so at a fraction of the integrated manufacturers' costs. Realizing where the future lay, competitors aggressively outsourced the manufacture of switching systems. Because of the resulting cost savings, they were able to quote lower prices than Lucent. Meanwhile, Lucent was reluctant to outsource its manufacturing because it had invested in its own factories. Ultimately, however, Lucent had no option but to shut down its Taiwan factory in 2002 and create an outsourced supply chain. The company's adaptation came too late for Lucent to regain control of the global market, even though the supply chain was agile and aligned.

the global telecommunications market because it didn't adapt quickly enough.

The best supply chains identify structural shifts, sometimes before they occur, by capturing the latest data, filtering out noise, and tracking key patterns. They then relocate facilities, change sources of supplies, and, if possible, outsource manufacturing. For instance, when Hewlett-Packard started making ink-jet printers in the 1980s, it set up both its R&D and manufacturing divisions in Vancou-

ver, Washington. HP wanted the product development and production teams to work together because ink-jet technology was in its infancy, and the biggest printer market was in the United States. When demand grew in other parts of the world, HP set up manufacturing facilities in Spain and Singapore to cater to Europe and Asia. Although Vancouver remained the site where HP developed new printers, Singapore became the largest production facility because the company needed economies of scale to survive. By the mid-1990s, HP realized that printer-manufacturing technologies had matured and that it could outsource production to vendors completely. By doing so, HP was able to reduce costs and remain the leader in a highly competitive market.

Adaptation needn't be just a defensive tactic. Companies that adapt supply chains when they modify strategies often succeed in launching new products or breaking into new markets. Three years ago, when Microsoft decided to enter the video game market, it chose to outsource hardware production to Singapore-based Flextronics. In early 2001, the vendor learned that the Xbox had to be in stores before December because Microsoft wanted to target Christmas shoppers. Flextronics reckoned that speed to market and technical support would be crucial for ensuring the product's successful launch. So it decided to make the Xbox at facilities in Mexico and Hungary. The sites were relatively expensive, but they boasted engineers who could help Microsoft make design changes and modify engineering specs quickly. Mexico and Hungary were also close to the Xbox's biggest target markets, the United States and Europe. Microsoft was able to launch the product in record time and mounted a stiff challenge to market leader Sony's PlayStation 2. Sony fought back by offering deep discounts on the product. Realizing that speed would not be as critical for medium-term survival as costs would be, Flextronics shifted the Xbox's supply chain to China. The resulting cost savings allowed Microsoft to match Sony's discounts and gave it a fighting chance. By 2003, the Xbox had wrested a 20% share of the video game market from PlayStation 2.

Smart companies tailor supply chains to the nature of markets for products. They usually end up with more than one supply chain, which can be expensive, but they also get the best manufacturing and distribution capabilities for each offering. For instance, Cisco caters to the demand for standard, high-volume networking products by commissioning contract manufacturers in low-cost countries such as China. For its wide variety of mid-value items, Cisco uses vendors in low-cost countries to build core products but customizes those products itself in major markets such as the United States and Europe. For highly customized, low-volume products, Cisco uses ven-

dors close to main markets, such as Mexico for the United States and Eastern European countries for Europe. Despite the fact that it uses three different supply chains at the same time, the company is careful not to become less agile. Because it uses flexible designs and standardized processes, Cisco can switch the manufacture of products from one supply network to another when necessary.

Gap, too, uses a three-pronged strategy. It aims the Old Navy brand at cost-conscious consumers, the Gap line at trendy buyers, and the Banana Republic collection at consumers who want clothing of higher quality. Rather than using the same supply chain for all three brands, Gap set up Old Navy's manufacturing and sourcing in China to ensure cost efficiency, Gap's chain in Central America to guarantee speed and flexibility, and Banana Republic's supply network in Italy to maintain quality. The company consequently incurs higher overheads, lower scale economies in purchasing and manufacturing, and larger transportation costs than it would if it used just one supply chain. However, since its brands cater to different

fancy. The Japanese automobile maker had expertise in tracking U.S. trends and geographical preferences, but it felt that it would be difficult to predict consumer response to a hybrid car. Besides, the Prius might appeal to particular consumer segments, such as technophiles and conservationists, which Toyota didn't know much about. Convinced that the uncertainties were too great to allocate the Prius to dealers based on past trends, Toyota decided to keep inventory in central stockyards. Dealers took orders from consumers and communicated them via the Internet. Toyota shipped cars from stockyards, and dealers delivered them to buyers.

Although Toyota's transportation costs rose, it customized products to demand and managed inventory flawlessly. In 2002, for example, the number of Toyotas on the road in Northern California and the Southeast were 7% and 20%, respectively. However, Toyota sold 25% of its Prius output in Northern California and only 6% in the Southeast. Had Toyota not adapted its distribution system to the product, it would have faced stock outs in

The best supply chains identify structural shifts, sometimes before they occur, by capturing the latest data, filtering out noise, and tracking key patterns.

consumer segments, Gap uses different kinds of supply networks to maintain distinctive positions. The adaptation has worked. Many consumers don't realize that Gap owns all three brands, and the three chains serve as backups in case of emergency.

Sometimes it's difficult for companies to define the appropriate markets, especially when they are launching innovative new products. The trick is to remember that products embody different levels of technology. For instance, after records came cassettes and then CDs. Video tapes were followed by DVDs, and almost anything analog is now or will soon become digital. Also, every product is at a certain stage of its life cycle, whether it's at the infant, ramp-up, mature, or end-of-life stage. By mapping either or both of those characteristics to supply chain partners, manufacturing network, and distribution system, companies can develop optimal supply chains for every product or service they offer.

For example, Toyota was convinced that the market for the Prius, the hybrid car it launched in the United States in 2000, would be different from that of other models because it embodied new technologies and was in its in-

Northern California and been saddled with excess inventory in the Southeast, which may well have resulted in the product's failure.

Building an adaptable supply chain requires two key components: the ability to spot trends and the capability to change supply networks. To identify future patterns, it's necessary to follow some guidelines:

- Track economic changes, especially in developing countries, because as nations open up their economies to global competition, the costs, skills, and risks of global supply chain operations change. This liberalization results in the rise of specialized firms, and companies must periodically check to see if they can outsource more stages of operation. Before doing so, however, they must make sure that the infrastructure to link them with vendors and customers is in place. Global electronics vendors, such as Flextronics, Soletron, and Foxcom, have become adept at gathering data and adapting supply networks.

- Decipher the needs of your ultimate consumers – not just your immediate customers. Otherwise, you may fall victim to the “bullwhip effect,” which amplifies and distorts demand fluctuations. For years, semiconductor

manufacturers responded to customer forecasts and created gluts in markets. But when they started tracking demand for chip-based products, the manufacturers overcame the problem. For instance, in 2003, there were neither big inventory buildups nor shortages of semiconductors.

At the same time, companies must retain the option to alter supply chains. To do that, they must do two things:

- They must develop new suppliers that complement existing ones. When smart firms work in relatively unknown parts of the world, they use intermediaries like Li & Fung, the Hong Kong-based supply chain architects, to find reliable vendors.

- They must ensure that product design teams are aware of the supply chain implications of their designs. Designers must also be familiar with the three design-for-supply principles: commonality, which ensures that products share components; postponement, which delays the step at which products become different; and standardization, which ensures that components and processes for different products are the same. These principles allow firms to execute engineering changes whenever they adapt supply chains.

Creating the Right Alignment

Great companies take care to align the interests of all the firms in their supply chain with their own. That's critical, because every firm – be it a supplier, an assembler, a distributor, or a retailer – tries to maximize only its own interests. (See the sidebar “The Confinement of Nonalignment.”) If any company's interests differ from those of the other organizations in the supply chain, its actions will not maximize the chain's performance.

Misaligned interests can cause havoc even if supply chain partners are divisions of the same company, as HP discovered. In the late 1980s, HP's integrated circuit (IC) division tried to carry as little inventory as possible, partly because that was one of its key success factors. Those low inventory levels often resulted in long lead times in the supply of ICs to HP's ink-jet printer division. Since the division couldn't afford to keep customers waiting, it created a large inventory of printers to cope with the lead times in supplies. Both divisions were content, but from HP's viewpoint, it would have been far less expensive to have a greater inventory of lower-cost ICs and fewer stocks of expensive printers. That didn't happen, simply because HP's supply chain didn't align the interests of the divisions with those of the company.

Lack of alignment causes the failure of many supply chain practices. For example, several high-tech companies, including Flextronics, Solectron, Cisco, and 3Com,

The Confinement of Nonalignment

It's not easy for executives to accept that different firms in the same supply chain can have different interests, or that interest nonalignment can lead to inventory problems as dire as those that may arise through a lack of agility or a lack of adaptability. But the story of Cisco's supply chain clinches the argument.

All through the 1990s, everyone regarded Cisco's supply chain as almost infallible. The company was among the first to make use of the Internet to communicate with suppliers and customers, automate work flows among trading partners, and use solutions such as remote product testing, which allowed suppliers to deliver quality results with a minimum of manual input. Cisco outsourced the manufacturing of most of its networking products and worked closely with contract manufacturers to select the right locations to support its needs. If ever there were a supply chain that was agile and adaptable, Cisco's was it.

Why then did Cisco have to write off \$2.25 billion of inventory in 2001? There were several factors at play, but the main culprit was the misalignment of Cisco's interests with those of its contract manufacturers. The contractors accumulated a large amount of inventory for months without factoring in the demand for Cisco's products. Even when the growth of the U.S. economy slowed down, the contractors continued to produce and store inventory at the same pace. Finally, Cisco found it couldn't use most of the inventory of raw materials because demand had fallen sharply. The company had to sell the raw materials off as scrap.

have set up supplier hubs close to their assembly plants. Vendors maintain just enough stock at the hubs to support manufacturers' needs, and they replenish the hubs without waiting for orders. Such vendor-managed inventory (VMI) systems allow suppliers to track the consumption of components, reduce transportation costs, and, since vendors can use the same hub to support several manufacturers, derive scale benefits. When VMI offers so many advantages, why hasn't it always reduced costs?

The problem starts with the fact that suppliers own components until they physically enter the manufacturers' assembly plants and therefore bear the costs of inventories for longer periods than they used to. Many sup-

pliers are small and medium-sized companies that must borrow money to finance inventories at higher interest rates than large manufacturers pay. Thus, manufacturers have reduced costs by shifting the ownership of inventories to vendors, but supply chains bear higher costs because vendors' costs have risen. In fact, some VMI systems have generated friction because manufacturers have refused to share costs with vendors.

One way companies align their partners' interests with their own is by redefining the terms of their relationships so that firms share risks, costs, and rewards equitably. For instance, the world's largest printer, RR Donnelley (which prints this magazine) recognized in the late 1990s that its supply chain performance relied heavily on paper-and-ink suppliers. If the quality and reliability of supplies improved, the company could reduce waste and make deliveries to customers on time. Like many other firms, RR Donnelley encouraged suppliers to come up with suggestions for improving processes and products. To align their interests with its own, however, the company also offered to split any resulting savings with suppliers. Not surprisingly, supplier-initiated improvements have helped enhance RR Donnelley's supply chain ever since.

Sometimes the process of alignment involves the use of intermediaries. In the case of VMI, for instance, some financial institutions now buy components from suppliers at hubs and sell them to manufacturers. Everyone benefits because the intermediaries' financing costs are lower than the vendors' costs. Although such an arrangement requires trust and commitment on the part of suppliers, financial intermediaries, and manufacturers, it is a powerful way to align the interests of companies in supply chains.

Automaker Saturn's service parts supply chain, one of the best in the industry, is a great example of incentive alignment that has led to outstanding results. Instead of causing heartburn, the system works well because Saturn aligned the interests of everyone in the chain—especially consumers.

Saturn has relieved car dealers of the burden of managing service parts inventories. The company uses a central system to make stocking and replenishment decisions for dealers, who have the right to accept, reject, or modify the company's suggestions. Saturn doesn't just monitor its performance in delivering service parts to dealers, even though that is the company's only responsibility. Instead, Saturn holds its managers and the dealers jointly accountable for the quality of service the vehicle owners experience. For example, the company tracks the off-the-shelf availability of parts at the dealers as the relevant metric. Saturn also measures its Service Parts Operation (SPO) division on the profits that dealers make from ser-

vice parts as well as on the number of emergency orders that dealers place. That's because when a dealer doesn't have a part, Saturn transfers it from another dealer and bears the shipping costs. The SPO division can't overstock dealers because Saturn shares the costs of excess inventory with them. If no one buys a particular part from a dealer for nine months, Saturn will buy it back as obsolete inventory.

That kind of alignment produces two results. First, everyone in the chain has the same objective: to deliver the best service to consumers. While the off-the-shelf availability of service parts in the automobile industry ranges from 70% to 80%, service part availability at Saturn's dealers is 92.5%. After taking transfers from other retailers into account, the same-day availability of spare parts is actually 94%. Second, the right to decide about inventory replenishment rests with Saturn, which is in the best position to make those decisions. The company shares the risks of stock outs or overstocks with dealers, so it has an interest in making the best possible decisions. Fittingly, the inventory turnover (a measure of how efficient inventory management is, calculated by dividing the annual cost of inventory sold by the average inventory) of spare parts at Saturn's dealers is seven times a year while it is only between one and five times a year for other automobile companies' dealers.

Like Saturn, clever companies create alignment in supply chains in several ways. They start with the alignment of information, so that all the companies in a supply chain have equal access to forecasts, sales data, and plans. Next they align identities; in other words, the manufacturer must define the roles and responsibilities of each partner so that there is no scope for conflict. Then companies must align incentives, so that when companies try to maximize returns, they also maximize the supply chain's performance. To ensure that happens, companies must try to predict the possible behavior of supply chain partners in the light of their current incentives. Companies often perform such analyses to predict what competitors would do if they raised prices or entered a new segment; they need to do the same with their supply chain partners. Then they must redesign incentives so partners act in ways that are closer to what's best for the entire supply chain.

Seven-Eleven Japan's Three Aces

Seven-Eleven Japan (SEJ) is an example of how a company that builds its supply chain on agility, adaptability, and alignment stays ahead of its rivals. The \$21 billion convenience store chain has remarkably low stock out rates and in 2004 had an inventory turnover of 55. With gross profit margins of 30%, SEJ is also

one of the most profitable retailers in the world. Just how has the 9,000-store retailer managed to sustain performance for more than a decade?

The company has designed its supply chain to respond to quick changes in demand—not to focus on fast or cheap deliveries. It has invested in real-time systems to detect changes in customer preference and tracks data on sales and consumers (gender and age) at every store. Well before the Internet era began, SEJ used satellite connections and ISDN lines to link all its stores with distribution centers, suppliers, and logistics providers. The data allow the supply chain to detect fluctuations in demand between stores, to alert suppliers to potential shifts in requirements, to help reallocate inventory among stores, and to ensure that the company restocks at the right time. SEJ schedules deliveries to each store within a ten-minute margin. If a truck is late by more than 30 minutes, the carrier has to pay a penalty equal to the gross margin of the products carried to the store. Employees reconfigure store shelves at least three

Fundamental to the supply chain's operation is the close alignment between Seven-Eleven Japan's interests and those of its partners. The incentives and disincentives are clear: Make Seven-Eleven Japan successful, and share the rewards. Fail to deliver on time, and pay a penalty. That may seem harsh, but the company balances the equation by trusting its partners. For instance, when carriers deliver products to stores, no one verifies the truck's contents. That allows carriers to save time and money, since drivers don't have to wait after dropping off merchandise.

When Seven-Eleven Japan spots business opportunities, it works with suppliers to develop products and shares revenues with them. For instance, two years ago, SEJ created an e-commerce company, 7dream.com, with six partners. The new organization allows consumers to order products online or through kiosks at SEJ stores and pick up the merchandise at any Seven-Eleven. The partners benefit from SEJ's logistics network, which delivers products to stores efficiently, as well as from the

The message to Seven-Eleven Japan's partners is clear: Make the company successful, and share the rewards. Fail to deliver on time, and pay a penalty.

times daily so that storefronts cater to different consumer segments and demands at different hours.

SEJ has adapted its supply chain to its strategy over time. Some years ago, the company decided to concentrate stores in key locations instead of building outlets all over the country. But doing so increased the possibility of traffic congestion every time the company replenished stores. The problem became more acute when SEJ decided to resupply stores three or more times a day. To minimize delays due to traffic snarls, the company adapted its distribution system. It asked its suppliers from the same region to consolidate shipments in a single truck instead of using several of them. That minimized the number of trucks going to its distribution centers, which is where SEJ cross-docks products for delivery to stores. The company has also expanded the kinds of vehicles it uses from trucks to motorcycles, boats, and even helicopters. The effectiveness of the company's logistics system is legendary. Less than six hours after the Kobe earthquake on January 17, 1995, when relief trucks were crawling at two miles per hour on the highways, SEJ used seven helicopters and 125 motorcycles to deliver 64,000 rice balls to the city.

convenient location of stores. By encouraging partners to set up multimedia kiosks to produce games, tickets, or CDs in its shops, Seven-Eleven Japan has become a manufacturing outlet for partners. The company could not have aligned the interests of its partners more closely with those of its own.

...

When I describe the triple-A supply chain to companies, most of them immediately assume it will require more technology and investment. Nothing could be further from the truth. Most firms already have the infrastructure in place to create triple-A supply chains. What they need is a fresh attitude and a new culture to get their supply chains to deliver triple-A performance. Companies must give up the efficiency mind-set, which is counterproductive; be prepared to keep changing networks; and, instead of looking out for their interests alone, take responsibility for the entire chain. This can be challenging for companies because there are no technologies that can do those things; only managers can make them happen. ▢

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Five years ago, salespeople at Whirlpool said the company's supply chain staff were "sales disablers." Now, Whirlpool excels at getting the right product to the right place at the right time – while keeping inventory low. What made the difference?

by Reuben E. Slone

Leading a Supply Chain Turnaround

Things would be very different today—for me, my colleagues, and my company – if the votes of Whirlpool's North American leadership team had swung in a different direction on May 3, 2001. It was a move I hadn't expected; Mike Todman, our executive vice president at the time, decided to go around the table and ask each member of his staff for a thumbs-up or thumbs-down on the investment that Paul Dittmann and I had just formally proposed. Did I look worried? I can't imagine I didn't, even though we'd spent hours in individual meetings with each of them, getting their ideas and buy-in. We thought we had everyone's support. But the facts remained: Our proposal had a bigger price tag than any supply chain investment in the company's history. We were asking for tens of millions during a period of general belt-tightening. Some of it was slated for new hires, even as cutbacks were taking place elsewhere in the company. And Paul and I, the people doing the asking, were coming from the supply chain organization.

Let me be clear: The supply chain organization was the part of the business that Whirlpool's salespeople were in the habit of calling the "sales disablers" in 2000. We were perpetually behind the eight ball, tying up too much capital in finished goods inventory – yet failing to provide the product availability our customers needed. Our availability hovered around 87%. Our colleagues grimly joked that in surveys on the delivery performance of the four biggest appliance manufacturers in the U.S., we came in fifth.



And here, with all the credibility that track record conferred on us, we were proposing an ambitious new suite of IT solutions – something, too, for which the company had little appetite. It had been just 20 months since Whirlpool North America had flipped the switch on a massive new ERP system, with less than desired effect. Normally, Whirlpool ships close to 70,000 appliances a day to North American customers. The day after we went live with SAP, we were able to ship about 2,000. A barrage of bad press followed. Even though the situation was soon righted (SAP remains a valued partner), the experience of being treated as a sort of poster child for ERP folly had left scars.

So imagine our relief when we heard the first voice say “yes.” It was the executive who headed up sales to Sears. Paul and I looked anxiously to the next face, and the next. The heads of our KitchenAid, Whirlpool, and value brands followed suit—a watershed, given that the funding would have to come from their budgets. I could see that J.C. Anderson, my boss and senior vice president of operations, was happy, too. He had tried to voice his support at the beginning of the meeting, but Mike Todman had asked him to wait. Now that it was his turn to vote, he did it with a flourish: “I am fully committed,” he said, “to moving our supply chain from a liability to a recognized competitive advantage.” Only after Todman had heard from everyone in the room – brands, sales, finance, human resources, and operations – did he cast his vote.

With that last yes, the tension broke, and everyone was smiling and nodding. Paul and I had a sense of triumph – but also trepidation. Because now, we knew, there could be no excuses. We were on the hook to deliver some serious value.

Devising the Strategy

My responsibility at Whirlpool today is for the performance of the global supply chain. But in 2001, I was focused only on North America, and I was utterly new to the supply chain organization. (I had come into the company a few years earlier to lead its e-business efforts.) By contrast, Paul Dittmann, the vice president of supply chain strategy, was a Whirlpool veteran with a tenure spanning a quarter century.

Our lots were cast together in October 2000 by Jeff Fetting. Jeff is now Whirlpool’s chairman and CEO, but at the time he was president and COO – and he was good and tired of hearing about spotty service and high logistics

costs. Sales had risen to record levels in 2000 as our launch of some innovative products coincided with an uptick in housing starts. With the rest of the company chugging on all cylinders, there was only one thing holding us back: our supply chain. Jeff called me into his office and gave me a two-word order: “Fix it.”

If that constitutes a mandate, we had one. But it was up to us to figure out what fixing the supply chain would entail. At the top level, of course, it’s a simple formulation: getting the right product to the right place at the right time – *all* the time. That gets complicated very quickly, however, when you consider the scale of the challenge. Whirlpool makes a diverse line of washers, dryers, refrigerators, dishwashers, and ovens, with manufacturing facilities in 13 countries. We sell those appliances in 100 countries, through retailers big and small and to the construction companies and developers that build new homes. In the United States alone, our logistics network consists of eight factory distribution centers, ten regional distribution centers, 60 local distribution centers, and nearly 20,000 retail and contract customers.

We needed to formulate a battle plan that would include new information technology, processes, roles, and talents. But before we could begin to imagine those, we needed to define our strategy. Looking to the future, what would it mean to be world-class in supply chain performance?

The decision we made at this very early point in the process was, I think, a pivotal one. We decided that we could answer that question only by focusing on customer requirements first. Our approach to developing our supply chain strategy would be to start with the last link – the consumer – and proceed backward.

It’s an obvious thought, isn’t it? Except that it wasn’t. The overwhelming tendency in a manufacturing organization is to think about the supply chain as something that originates with the supply base and moves forward. It’s understandable: This is the part of the chain over which the company has control. But the unfortunate effect is that supply chain initiatives typically run out of steam before they get to their end point – and real point. Whether or not they make customers’ lives easier becomes an afterthought.

Understanding Customers’ Needs. If you start with the customer, the customer can’t be an afterthought. The way I expressed this to my colleagues was to say, “Strategic relevance is all from the consumer back.” And conveniently, we had new research to consult on the subject of consumer needs. Whirlpool and Sears had recently engaged Boston Consulting Group to study consumers’ desires with regard to appliance delivery. The top-line finding was that people value what I call “delivery with integrity.” That is, your ability to get it there fast is important, but

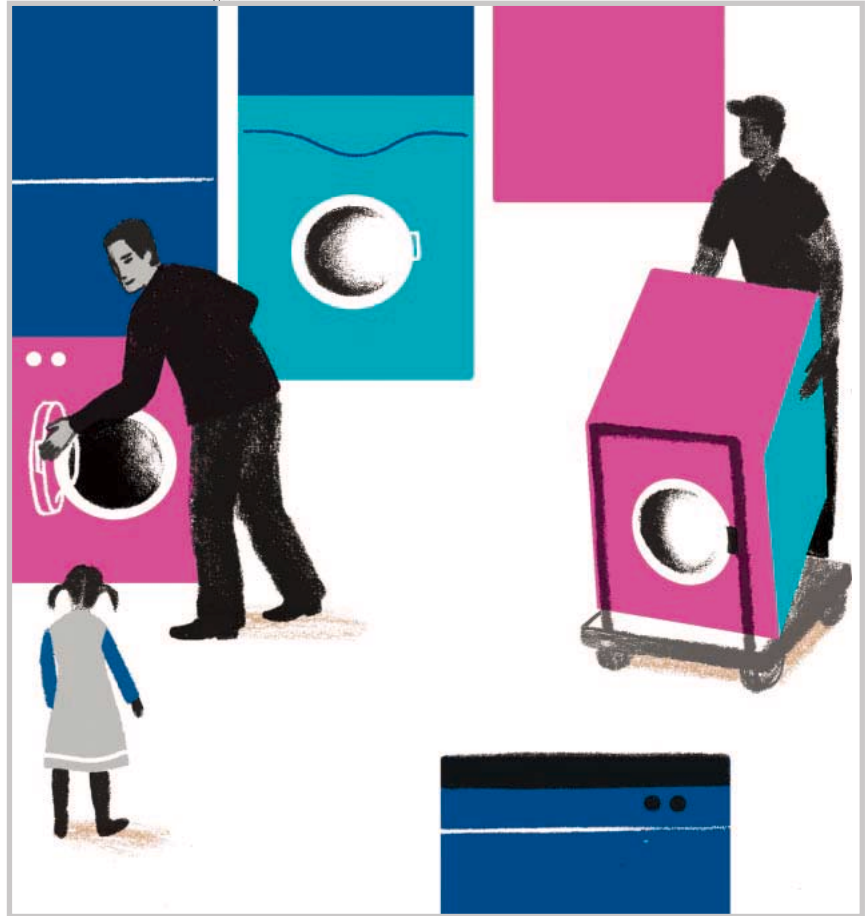
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not as important as your ability to get it there when you said you would. "Give a date, hit a date" is what they're asking for. This sounded familiar to me, coming from the automotive industry. In my previous position at General Motors, I'd been involved in several studies that emphasized the psychology of delivery date commitments.

Identifying Trade Partners' Priorities. Moving upstream, we needed to understand the desires of our direct customers better. We conducted our own interviews to define requirements by segment. As well as looking at smaller retailers versus larger ones, we focused individually on Sears, Lowes, and Best Buy, our three biggest customers. And within the contract-builder market, we studied many subdivisions, from contract distributors and apartment developers to single-family-home builders. We asked about their overall availability requirements, their preferences in communicating with us, and what they would like to see along the lines of e-business. We asked about inventory management and how they might want Whirlpool to assist in it. In all, we discovered 27 different dimensions along which our performance was being judged, each varying in importance according to the customer.

Benchmarking the Competition. Naturally, our customers' expectations and perceptions were shaped in large part by what others in our industry were doing. So we benchmarked our competitors—primarily GE, which was our biggest rival. We obtained cross-industry information and competitive intelligence from AMR, Gartner, and Forrester Research to make sure we had a broad and objective assessment of supply chain capabilities. Then we mapped out what would be considered world-class (versus sufficient or transitional) performance for each of the 27 capabilities and how much it would cost us to reach that top level. It turned out that to prevail on every front would require a total investment of more than \$85 million, which we knew wasn't feasible. It was time to get serious about priorities.

Now that we had established the cost of world-beating performance, we asked ourselves: For each capability, what improvement could we accomplish at a low invest-



ment level, and at a medium level? We quickly staked out the areas where a relatively small investment would yield supremacy, usually due to an existing strength. A few areas we simply decided to cede. Our plan was to meet or beat the competition in most areas, at minimum cost.

Building for the Future. Strategy, of course, does not simply address the needs of the moment. It anticipates the challenges of the future. A final component of our supply chain strategy was identifying the probable range of future operating scenarios based on industry, economic, and technological trends. The point was to assure ourselves that our proposal was robust enough to withstand these various scenarios. To date, the planning has worked. Having set a course, we've been able to deal with situations we hadn't conceived of and to continue evolving in the same basic direction.

Selling the Revolution

It's always a difficult decision—when to involve your internal customers in the planning of a major capital investment. Their time is scarce, and they typically

don't want to be embroiled in the details of what you, after all, are getting paid to do. You must have your act together and have a solid plan to which they can respond. On the other hand, you can't be so far along in the process that you've become inflexible. You need to maintain a careful balance between seeking their guidance and selling your vision.

Paul and I liked to think we had that mandate from Jeff Fetting to get the supply chain fixed. But it wasn't the kind of mandate that comes with a blank check. Like most well-managed companies, Whirlpool will not undertake a capital investment without a compelling business case. As a cost center in the company, we had to justify our project wholly on expense reductions and working capital improvements. Even if we believed that better product availability would boost sales, we couldn't count those chickens in the business case.

We spent an enormous amount of time talking with the brand general managers and others who would be

needed. They said they had nothing more to add. But we persisted. I remember telling Paul, "If they won't let us in the door, we'll go through the window. And if they lock the window, there's always the air vent...."

Along the way, we'd been particularly concerned about cherry-picking. We knew that, in a company of smart businesspeople, the first reaction to a multimillion-dollar price tag would be, "OK, what can I get for 80% of that total?" And indeed, from a project management standpoint, we knew it was important to break out each component of the plan into a stand-alone initiative, justified by its own business case. Yet we knew the whole thing came together as a sort of basket weave, with each part supporting and relying on multiple other parts.

What helped here was our competitive analysis, in which we had plotted our capability levels against others'. We charted our current position against our number one competitor on each dimension valued by customers, then extrapolated to show how, depending on the level

We staked out the areas where a relatively small investment would yield supremacy, usually due to an existing strength.

affected by the changes we were proposing. The Japanese call this kind of consensus-building *nemawashi* (literally, it means "root binding"), and it is impossible to overstate its importance. Yet it is often neglected in the midst of a complex project. Note that, at the same time we needed to be meeting with key decision makers, we were also in the thick of the analysis and design of the solution. In those early months, the project needed leadership in two directions – the kind of work people typically refer to as needing a "Mr. Inside" and "Mr. Outside." I made sure we had sufficient consulting resources for the inside work while Paul and I devoted 50% of our time to the outside work – interfacing with the trade, outside experts, and internal stakeholders.

In our initial meetings with these key people, we'd essentially say, "Here's what we're doing. What do you think?" Typically, the executive would half pay attention, half blow us off. But we'd get some input. In a second meeting, we'd show how our work had evolved to incorporate their ideas and others'. Usually, we'd see more engagement at this point. By the time we were asking for a third meeting, reactions were mixed. People were more or less on board, but some felt another meeting wasn't

of investment, we could overtake that company or allow the gap to widen. Sure enough, the competitive instincts of our colleagues kicked in. No one wanted to fall behind.

Getting Focused

One of the earliest successes in the turnaround of Whirlpool's supply chain was the rollout of a new sales and operations planning (S&OP) process. Our previous planning environment had been inadequate. What passed for planning tools didn't go far beyond Excel spreadsheets. Now, we had the ability to pull together the long-term and short-term perspectives of marketing, sales, finance, and manufacturing and produce forecasts that all the participants could base their game plans on.

We soon pushed our forecasting capability further by launching a CPFR pilot. The acronym stands for collaborative planning, forecasting, and replenishment, with the collaboration happening across different companies within a supply chain. The idea is straightforward. Traditionally, we forecast how many appliances we will sell through a trade partner (Sears, for example) to a given

market. And at the same time, that trade partner develops its own forecast. Each of us has some information that the other lacks. With CPFR, we use a Web-based tool to share our forecasts (without sharing the sensitive data behind them), and we collaborate on the exceptions. As simple as it sounds, it isn't easy to pull off. But we have, and it's been a real home run. Within 30 days of launch, our forecast accuracy error was cut in half. Where we had close to 100% error (which isn't hard, given the small quantities involved in forecasting individual SKUs for specific warehouse locations), today we're at about 44% or 45%. To put this in perspective, a one-point improvement in forecast accuracy across the board reduces our total finished goods position by several million dollars.

These were just two of many initiatives we launched in rapid succession after May 2001. A couple things were absolutely critical to keeping them all on track: a highly disciplined project management office and stringent performance metrics. The key was to think big but focus relentlessly on near-term deadlines. We organized the change effort into 30-day chunks, with three new capabilities, or business releases, rolling out monthly—some on the supply side, some on the demand side.

The job of the project management office was to ensure the completion of projects on time, on budget, and on benefit. Paul oversaw this for me. Also keeping us honest were new metrics—and the man I brought in to enforce them. My colleague John Kerr, now general manager of quality for the North America division, was then in charge of Whirlpool's Six Sigma program. He's a real black belt when it comes to performance management. It took some persuading, aimed at both John and the North American leadership team, before he was freed up and allowed to dedicate himself to the supply chain turnaround. But we absolutely needed his data-driven perspective. When one of my team would say, "We need to take this action to fix this issue," John would always counter with, "Please show me the data that allowed you to draw that conclusion." Were these demands sometimes a source of irritation? I'd be lying if I said they weren't. But they forced all of us to rebuild the metric "fact base" and hone our problem-solving skills.

By the third quarter of 2001, we had already done a lot to stabilize product availability and reduce overall supply chain costs. And, after a challenging fourth quarter, we took a huge step forward by implementing a suite of software products from i2, which specializes in supply chain integration tools. That was in January 2002. Six months later, Whirlpool had historic low inventories and a sustained high service level. Before the year was out, we were delivering very near our target of 93% availability across all brands and products. (Momentum has since carried us

well into the mid-nineties.) We delivered slightly more than promised by reducing finished goods working capital by 10% and improving total cost productivity by 5.1%.

Our customers were voicing their approval. By May 2002, a blind Internet survey given to our trade partners showed us to be "most improved," "easiest to do business with," and "most progressive." I remember that after these results came out, our VP of sales said, "You're good now—but more important, you're *consistently* good." It was a turning point in the trade's perception of Whirlpool.

Engaging Talent

I've touched on the state-of-the-art technologies we've employed in our turnaround—the Web-based collaboration tools, the planning software, i2's rocket-science optimization—but let me correct any impression that this is a story about technology. More than anything, Whirlpool's supply chain turnaround is a talent renaissance.

It's sometimes hard for us to remember how demoralized this 3,000-person organization had become. In 2000, many people in supply chain roles had been with the company for years and had watched in frustration as competitors outspent and outperformed us. Part of the problem was the massive effort required by the ERP implementation. As an early adopter of enterprise systems in our industry (SAP and other vendors got their start with process-manufacturing concerns like industrial chemicals), Whirlpool had bitten off a lot. With limited attention and resources to spare, it put other projects on hold. We took our eye off the ball in supply chain innovation and fell behind.

As a newcomer, I tried to inject some fresh energy into the organization and give people a reason to be confident. Paul Dittmann told me this project gave him a "second career wind." He's a brilliant guy, with a PhD in operations research and industrial engineering, and suddenly, he had the opportunity to innovate in ways he had only dreamed of in his first 20 years at the company.

Other people benefited from changes to how we develop, assess, and reward talent. With help from Michigan State University and the American Production and Inventory Control Society (APICS), we developed a supply chain "competency model." This is essentially an outline of the skills required in a top-tier organization, the roles in which they should reside, and how they need to be developed over time. And we created a new banding system, which expanded the compensation levels in the organization. Now people can be rewarded for increasing their expertise even if they are not being promoted into supervisory roles.

We also put a heavy emphasis on developing people's project management skills. Here, we relied on a model developed by the Project Management Institute (PMI), a sort of standard for assessing and enhancing an organization's project management capabilities. I wanted as many supply chain professionals as possible to become PMI-certified, and not just because of the glut of projects we were facing at the moment. My view is that project management's disciplined planning and execution is just as vital to ongoing operations management. After all, the only real difference between running an operation and running a project is the due date of the deliverable. Over time, my operating staff stopped dismissing project management as a lot of "overhead" from a former management consultant and car guy. Now they're the ones insisting on things like project charters and weekly project reviews.

Meanwhile, we hired at least 13 new people on the business side and at least as many more on the information systems side, and I made sure that every one of them was top-notch. To fill out our project management ranks, we recruited young people from companies with strong supply chains and from premier operations-oriented MBA programs like Michigan State and the University of Tennessee. Perhaps we were lucky that our talent drive coincided with a downturn in the consulting industry. On the other hand, it might have been the excitement of a turnaround situation that drew the best and brightest to Whirlpool.

Finally, I wasn't so arrogant as to believe that my senior team and I didn't need development ourselves. We assembled a supply chain advisory board and chartered its members to keep challenging us. The group includes academics Don Bowersox of Michigan State and Tom Mentzer of the University of Tennessee, and practitioners Ralph Drayer (the Procter & Gamble executive who pioneered Efficient Consumer Response) and Larry Sur (who mastered transportation and warehouse management in a long career at Schneider National and GENCO). Get a group like this together, and you can count on creative sparks flying. These experts keep us on our toes in a way no consulting firm could.

Sustaining Momentum

Three years into the project now, we continue to assign ourselves and deliver three new capabilities per month. This doesn't get simpler over time, either. As I write this, for example, we're focused on something we call "Plan to Sell/Build to Order." Here, the notion is that certain high-volume SKUs should never be out of stock. These are the heart-of-the-line dishwashers,

refrigerators, washing machines, and other products that appeal to a broad range of consumers. They are the equivalent of a supermarket's milk and eggs; running out of them has a disproportionately negative impact on customers' perceptions.

We're now formulating a supply chain strategy that allows us to identify these SKUs across all of our trade partners in all of our channels and to ensure that the replenishment system for our regional warehouses keeps them in stock. That constitutes the "plan to sell" part of the program. At the same time, for our smallest-volume SKUs, we are taking out all the inventory and operating on a pure pull basis, with a new, more flexible build-to-order process. The inventory savings on the small-volume SKUs helps offset the costs of stocking up on the high-volume SKUs.

We're also working on the capability to set service levels by SKU. That is, instead of having one availability target for all our products, we are recognizing that some products are of greater strategic importance than others. Some of them, for instance, are more profitable. Some hold a unique place in our brand strategy. Again, it's easy to grasp the value of being able to vary service levels accordingly. But in a sprawling business like ours, shipping thousands of different SKUs daily, it's a very difficult thing to accomplish.

We continue to develop new Web-based tools. Recently, we've been focused on system-to-system transactions, in which our system talks directly to a customer's system for purposes of transmitting orders, exchanging sales data, and even submitting and paying invoices. We've rolled out this capability with a number of trade partners over the past 18 months. At the same time, we keep enhancing our Partner Store, which allows customers to check availability and place orders via the Internet. The site allows them to find near equivalents of models, for those times when a SKU is out of stock or retired. They can even find deals on obsolete inventory.

By the time this article appears in print, we'll also have implemented event-management technology, which will allow us to be more on top of the movement of goods through the supply chain. An event manager provides an alert whenever an action in the process has taken place—for example, when a washer is loaded into a container in Schorndorf, when that container full of washers is loaded onto a ship in Rotterdam, when the ship departs, when the ship arrives, when the container is unloaded from the ship in Norfolk, when the container leaves the port via truck, and, finally, when the washer is unloaded at the Findlay, Ohio, warehouse. The result is that people's attention is directed to what needs to be done. We'll also be further along in our application of

lean techniques (usually associated with manufacturing operations) to our total supply chain. This involves using pull concepts and kanbanlike triggers to speed up processes, reduce inventory, and enhance customer service.

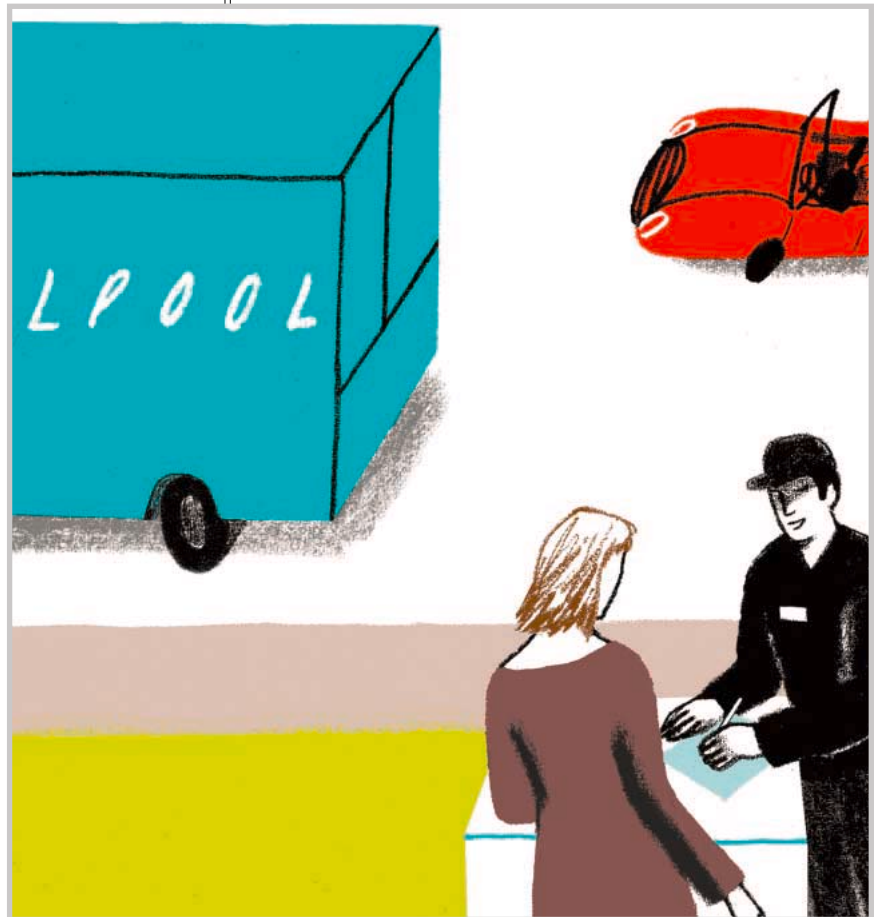
On the Horizon

Whirlpool has much to show for its supply chain efforts. By the end of 2003, our product availability had reached over 93%, up from 88.3% in 2001. (Today it's more than 95%.) That allowed us to attain an order fill rate for key trade partners of over 96%. The number of days' worth of finished goods we were holding in inventory had dropped from 32.8 to just 26. We drove freight and warehousing total cost productivity from 4% to 7.2%. From 2002 to 2003, we lowered working capital by almost \$100 million and supply chain costs by almost \$20 million. Does all this add up to value in excess of the expense our leadership team approved? Absolutely. In fact, total payback on that original investment occurred within the first two years.

Still, our work is far from finished. In October 2001, just months after we kicked off our turnaround, we were fortunate in that the new executive vice president brought in to run Whirlpool's North America region had deep supply chain knowledge. Dave Swift, who came to us from Kodak, believes strongly in the strategic importance of the supply chain both for building brands and for creating sustainable competitive advantage. Immediately after joining us, he elevated our sales and operations planning process by personally chairing monthly executive S&OP meetings. These meetings have become the model for the company and the basis for much of our just-started global supply chain efforts.

In the future, we'll face greater demands for end-to-end accountability. We're already responsible for the resale of any returns. Soon we'll be accountable for the disassembly of products in Europe. It's only a matter of time before similar laws are enacted in the United States.

And we'll be taking an even closer look at the design of the products themselves. If we can redesign a product—



make it in a smaller plant, make it with smaller parts, ship it in smaller pieces — we can dramatically affect supply chain economics. It's great to improve forecasts, optimize transportation, and speed up our processes with existing SKUs. But what if we could push the end stages of production closer to the consumer and get higher leverage from those SKUs? That's the kind of thing that can change the rules of the game.

It's a wonderful thing about our business: We have fierce competition all over the world, and on top of that we have very smart trade partners who deal with numerous other suppliers. We may be a white goods, big box supplier, but because our customers also buy electronics and apparel and so on, we're constantly being challenged by the benchmarks of other, more nimble industries. Technologies continue to evolve, channel power continues to shift, and the bar is constantly being raised. But I'm confident that the talent in Whirlpool's supply chain organization will be equal to it all. 

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To order, see page 159.

The United States built the world's most powerful economy by producing and attracting human capital. Is America throwing that advantage away?

America's Looming Creativity Crisis

by Richard Florida

THE UNITED STATES OF AMERICA—for generations known around the world as the land of opportunity and innovation—is on the verge of losing its competitive edge. It is facing perhaps its greatest economic challenge since the dawn of the industrial revolution. This challenge has little to do with business costs and even less with manufacturing prowess. And, no, the main competitive threats are not from China or India.

Even though the United States led the world into the era of high-tech industry and constant innovation, it is by no means the nation's manifest destiny to stay on top. In fact, the great majority of U.S. business and political leaders, academics, and economic analysts fail to grasp the true reason behind American success in innovation, economic growth, and prosperity. It is not the country's generous endowment of natural resources, the size of its market, or some

indigenous Yankee ingenuity that has powered its global competitiveness for more than a century. America's growth miracle turns on one key factor: its openness to new ideas, which has allowed it to mobilize and harness the creative energies of its people.

As Stanford University economist Paul Romer has long argued, great advances have always come from ideas. Ideas do not fall from the sky; they come from people. People write the software. People design the products. People start the new businesses. Every new thing that gives us pleasure or productivity or convenience, be it an iPod or the tweaks that make a chemical plant more efficient, is the result of human ingenuity.

True, the United States is still the world's center of ingenuity. Its GDP tops \$10 trillion, and it is home to great universities, Silicon Valley, and many of the most dynamic companies in infor-

mation technology, biotech, entertainment, and countless other fields. But the global talent pool and the high-end, high-margin creative industries that used to be the sole province of the U.S., and a crucial source of its prosperity, have begun to disperse around the globe. A host of countries—Ireland, Finland, Canada, Australia, New Zealand, among them—are investing in higher education, cultivating creative people, and churning out stellar products, from Nokia phones to the *Lord of the Rings* movies. Many of these countries have learned from past U.S. success and are shoring up efforts to attract foreign talent—including Americans. If even a handful of these rising nations draws away just 2% to 5% of the creative workers from the U.S., the effect on its economy will be enormous. The United States may well have been the Goliath of the twentieth-century global economy, but it will take

just half a dozen twenty-first-century Davids to begin to wear it down.

To stay innovative, America must continue to attract the world's sharpest minds. And to do that, it needs to invest in the further development of its creative sector. Because wherever creativity goes—and, by extension, wherever talent goes—innovation and economic growth are sure to follow.

The Dawn of the Creative Age

There's a whole new class of workers in the U.S. that's 38 million strong: the creative class. At its core are the scientists, engineers, architects, designers, educators, artists, musicians, and entertainers, whose economic function is to create new ideas, new technology, or new content. Also included are the creative professions of business and finance, law, health care, and related fields, in which knowledge workers engage in complex problem solving that involves a great deal of independent judgment. Today, the creative sector of the U.S. economy, broadly defined, employs more than 30% of the workforce (more than all of manufacturing) and accounts for nearly half of all wage and salary income (some \$2 trillion)—almost as much as the manufacturing and service sectors together. Indeed, the United States has now entered what I call the Creative Age.

The roots of the Creative Age in the U.S. can be traced to the years surrounding World War II. After the war, federal funding for basic research jumped considerably, and so did the number of people pursuing higher education, thanks in part to the GI Bill. In the private sector, the newly formed venture capital industry provided an avenue for bringing research ideas to market. The social movements of the 1960s popularized the idea of openness; to be different was no longer to be an outcast but to be admired. Freedom of expression allowed new technologies and cultural forms to flourish—from biotechnology to alternative rock.

But the United States doesn't have some intrinsic advantage in the cultivation of creative people, innovative



JOHN HENDRIX

ideas, or new companies. Rather, its real advantage lies in its ability to attract these economic drivers from around the world. Of critical importance to American success in this last century has been a tremendous influx of talented immigrants. Immigrants have, of course, helped power American growth since the dawn of the Republic. But since the 1930s, the U.S. has welcomed a stream of scientific, intellectual, cultural, and entrepreneurial talent, as Europeans fled fascism and communism. This talent has helped make the U.S. university system and innovative infrastructure second to none.

The stream surged to historic levels in the 1980s and 1990s, thanks to more liberal immigration policies and a booming economy. In the 1990s alone, U.S. census figures reveal, more than 11 million people came to America. The largest wave of immigration in U.S. history, it brought with it talent from all corners of the globe. Think of high-tech luminaries Sergey Brin, the Moscow-born cofounder of Google, and Hotmail cofounder Sabeer Bhatia, who grew up in Bangalore. The foreign-born population of the United States currently numbers more than 30 million, or some 11% of the population.

The Creativity-Competitiveness Connection

But already the percentage of the population represented by immigrants is higher in Canada (18%) and Australia (22%) than in the United States. These countries understand that today's global economy centers on competition for people rather than for goods and services. As Pete Hodgson, New Zealand's minister for research, science, and technology, recently explained to me, "We no longer think of immigration as a

gatekeeping function but as a talent-attraction function necessary for economic growth."

A close look at international statistics shows that the creative class represents a larger percentage of the workforce in many other countries than it does in the United States. Along with Irene Tinagli, a doctoral student at Carnegie Mellon,

den (42.4%), Switzerland (42%), Denmark (42%), Norway (41.6%), Belgium (41.4%), Finland (41%), and Germany (40%). It constitutes more than 30% of the workforce in virtually all the remaining countries. What's more, the growth rate of the creative class in several nations has been phenomenal over the past decade or so. Since 1991, for in-

The United States may well have been the Goliath of the twentieth-century global economy, but it will take just half a dozen twenty-first-century Davids to begin to wear it down.

I set out to compare the size of the creative class in different countries by establishing the "Global Creative-Class Index" (GCCCI). Using employment data and the job classifications established by the International Labour Organization (ILO), the index is a straightforward calculation of the number of people employed in creative job categories in each country divided by the country's total number of workers. In the exhibit, "The Global Creative-Class Index," we compare the percentage of workers in the creative classes in 25 nations.

Far from being the leader, the United States is not even in the top ten. The creative class constitutes around a third of the workforce in Ireland, Belgium, Australia, and the Netherlands; it accounts for roughly a quarter of the workforce in six other countries: New Zealand, Estonia, the United Kingdom, Canada, Finland, and Iceland. When our U.S. data are adjusted to be comparable to the ILO figures (which use a narrow definition of creative job categories that excludes "technicians"), the United States comes in, with 23.6%, at 11th, worldwide. Of course because the overall workforce in America is so large, that translates into a sizable group in absolute numbers – some 30 million people.

Still, if technicians are included in the international analysis, the creative class rises to more than 40% in some eight countries: the Netherlands (47%), Swe-

den, New Zealand's creative class has jumped from 18.7% to 27.1%, and Ireland's has nearly doubled, starting from the same 18.7% and rising to 33.5%.

In today's economy, creativity and competitiveness go hand in hand. It's not surprising, then, that our GCCCI rankings correlate closely with results from other studies of international competitiveness. Harvard Business School's Michael Porter, for instance, ranked the United States as the world's most competitive nation in his initial 1995 global Innovation Index. According to Porter's projections, by 2005, the U.S. will have tumbled to sixth among the 17 member countries of the Organisation for Economic Co-operation and Development (OECD) – trailing (in order) Japan, Finland, Switzerland, Denmark, and Sweden. The 2004 Globalization Index developed by A.T. Kearney and published in *Foreign Policy* ranks the United States seventh, behind Ireland, Singapore, Switzerland, the Netherlands, Finland, and Canada.

Rankings of individual companies' competitiveness yields similar results. According to *BusinessWeek's* 2004 Information Technology 100, for instance, only six of the world's 25 most competitive high-tech companies are based in the United States, while 14 are in Asia.

In the area of patents and publications, America's formidable lead has been eroding, as well. Today, foreign-owned companies and foreign-born in-

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ventors account for nearly half of all patents issued in the United States. A study by CHI Research found that inventors in Japan, Taiwan, and South Korea alone account for more than a quarter of all U.S. industrial patents awarded each year. In terms of publications, the National Science Board reports that back in 1988, U.S. scientists produced 178,000 scientific papers, or 38% of all scientific and engineering papers worldwide. But by 2001, the European Union nations were the largest producers of scientific literature. In the field of physics, the U.S. lead fell from 61% of all publications in 1983 to 29% in 2003, according to *Physical Review*.

Taken individually, none of those facts would be cause for concern about the future of the United States. It is, after all, a very rich country with diverse strengths. Cumulatively, though, the data create an unsettling picture of a nation that's allowing its creativity infrastructure to decay. Add to that greater security concerns and a highly politicized scientific climate, and it's easy to see why the nation is becoming less and less attractive to the world's brightest minds.

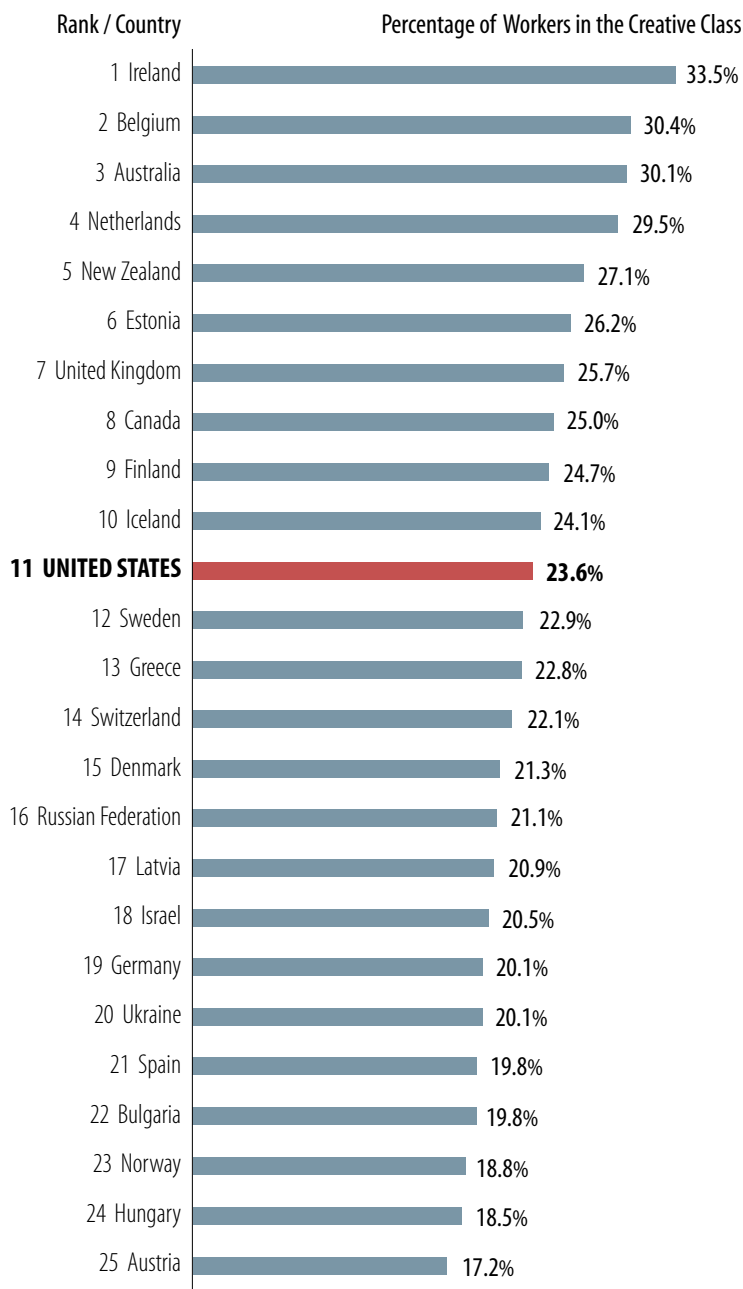
The Talent Gap

Today, virtually the entire public dialogue about jobs in the United States revolves around outsourcing and unemployment. But these are the short-term issues. The real long-term predicament facing the United States and the world is the looming shortage of creative talent.

Economists like Lawrence Summers, president of Harvard University and a former Treasury secretary, and Edward Montgomery, a former Labor Department deputy secretary, view the shortage of skilled and talented workers as all but inevitable. A 2003 National Association of Manufacturers report concurs, predicting that a skilled-worker gap will start to form in 2005, widening to 5.3 million workers by 2010 and 14 million by 2020. The labor shortages that plagued high-tech companies in the halcyon days of 1999 and 2000 will look like a "minor irritation" in comparison,

The Global Creative-Class Index

America may be the land of opportunity, but it no longer has a lock on the best and the brightest jobs—the ones that create new ideas, new technology, or new content. When we calculated the number of people engaged in such jobs as a proportion of the general workforce in scores of countries, the United States wasn't even in the top ten.



Note: Data for the Russian Federation refer to 1999; for the Netherlands and Bulgaria, 2001; for the United States, 2003. All other figures refer to 2002, the latest year for which those data are available.

Source: Compiled by Irene Tinagli from International Labour Organization and U.S. Bureau of Labor Statistics data.

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contends labor market expert Anthony Carnevale, the report's author.

The cause of this labor squeeze is easy to see: Baby boomers now constitute about 60% of the prime-age workforce—that is, workers between the ages of 25 and 54. In the coming decades, boomers will retire in massive numbers, and there simply aren't enough younger workers to take their places. The talent shortage will hit every sector of the U.S. economy, but it will be felt most acutely at the cutting edges of science and engineering. Since 1980, the number of jobs in those segments has grown four times faster than the overall employment rate, and the Bureau of Labor Statistics expects that number to swell by nearly 50% again by 2010—adding a further 2.2 million new jobs. At the same time, the average age of the scientific and technological worker is rising. More than half are 40 or older, and many will leave the workforce in the next two decades.

You don't have to be a rocket scientist to figure out that there is only one way for the United States to fill this gap: foreign talent. Former director of the U.S. Census and Columbia University professor Kenneth Prewitt says that the United States will increasingly depend on these "replacement people" to provide vital skills and grow new industries. But that may not be as easy as it once was.

The Canaries of the Talent Mine

Students are a leading indicator of global talent flows. The countries and regions that attract them have a leg up on retaining them and also on attracting other pools of foreign talent—scientists, researchers, inventors, entrepreneurs.

For decades, international students have flocked to the United States to take advantage of the world-class education offered there. In the 2002–2003 academic year alone, according to the Institute of International Education (IIE)—the body that grants the Fulbright scholarships—roughly 585,000 foreign students attended U.S. colleges and universities, up from less than 50,000 in 1960,

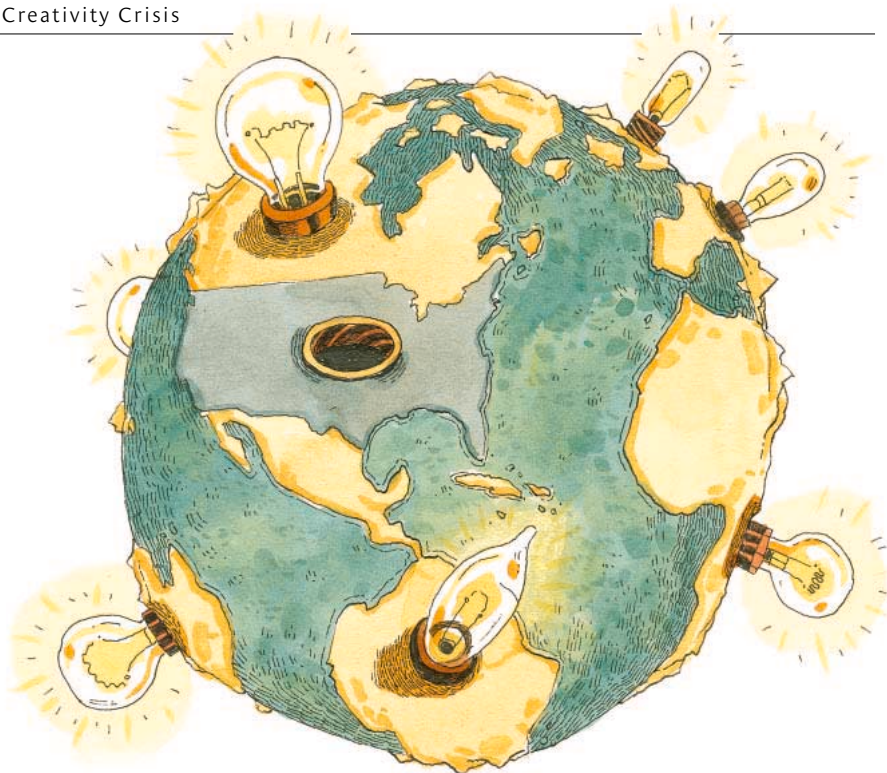
and international education contributed \$12.9 billion to the U.S. economy. But in 1999, well before anyone had heard the phrase "dot-com collapse," the Council on Competitiveness had warned that the nation should not count on keeping the international students who come to study at elite universities.

More recently, a March 2004 report by the Council of Graduate Schools found that international student applications for fall 2004 admission had dropped sharply at 90% of the graduate schools responding to its survey. The total decline was 32%. Applications fell off most from the countries that have traditionally sent the most students: More than half of all foreign-born graduate students hailed from Asia, including 14% from India and 10% from China. The figures show that the number of Chinese students applying to U.S. graduate schools declined by 76%, and the number of Indian students was 58% lower than it was the previous year. Signs don't point to a turnaround anytime soon. The Educational Testing Service found that one-third fewer international students applied to take the Graduate Record Examinations (GREs)

for the 2004 academic year than they did for 2003. The number of Chinese test takers was down 50%; Taiwanese, 43%; Indians, 37%; and Koreans, 15%.

One reason for this is good news from a global perspective. Several major economies—most notably India's and China's—have grown to the point where they can offer great opportunities for people who stay or return home. Both of those countries are investing heavily to build excellent university systems of their own. Peter Drucker said recently that India may already have the greatest engineering and medical schools in the world.

Foreign students are not only finding attractive educational opportunities in other countries, they are also facing obstacles to studying in the United States. A survey of educators at 276 U.S. campuses conducted by the IIE found a significant drop in enrollment to U.S. universities in fall 2003 from students whose home countries have large Islamic populations, especially United Arab Emirates, Saudi Arabia, and Pakistan. Fifty-nine percent of respondents cited the visa application process as a reason for the decline.



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The *New York Times* reports that the rejection rate for “cultural exchange” visas, used by many medical students, rose from 5.1% in fiscal year 2001 to 7.8% in fiscal 2003. And the number of students whose visas were rejected rose from 27.6% in FY2001 to 35.2% in FY2003, according to the National Science Board’s *Science & Engineering Indicators—2004*.

Having taught at several major universities – Ohio State, Harvard, MIT, and Carnegie Mellon – I’ve known many foreign students. They have always been quick to point out the benefits of studying and conducting research in the United States. But their impressions have changed dramatically over the past year. They complain of being hounded by immigration agencies as potential threats to security, and they feel that the war on terror is leading America to abandon its commitment to an open society. Many have told me they are thinking of leaving the U.S. for graduate education and professional positions in other nations. They also report that growing numbers of their friends and colleagues back home are no longer interested in coming to America for their education.

James Langer, vice president of the National Academy of Sciences, spoke plainly about what the drop in foreign

at San Diego recently quipped, it may be time for academics in that part of the country to “have our scientific meetings in Tijuana,” because at least there international experts can get in. In short, as Langer concluded, “American science is being isolated from the rest of the world.”

Sadly, restricting foreign immigration will not open up more places for home-grown talent in the top American graduate programs and research facilities. The U.S. has many brilliant young people but not nearly enough to satisfy the demand the nation’s powerhouse economy has created.

Other countries are taking full advantage of America’s fading allure. English-speaking Canada, the United Kingdom, and Australia are particularly well placed to capitalize on this opportunity. In June 2003, an eminent Oxford professor told me that the university had “never seen so many applications from top international students,” adding that these students seem to be “looking for alternatives to top American universities” like Harvard, Chicago, MIT, and Stanford. In fact, together, the United Kingdom, Germany, France, Australia, and Japan attracted 650,000 foreign students—some 11% more than the United States – according to the *2003 Atlas of Student Mobility*, compiled by the IIE. And the

The evidence suggests that the country may be losing out on the talents of a host of foreign scientists, engineers, inventors, and other professionals. Visa delays have cost U.S. businesses roughly \$30 billion in two years, according to a June 2004 study commissioned by the Santangelo Group. The group is a consortium of leading U.S. industry organizations ranging from the Aerospace Industries Association to the National Foreign Trade Council to the Association for Manufacturing Technology, and its study was based on a survey of 734 of its member companies. Of the 141 companies that responded, 73% reported having had problems processing business visas since 2002, and the average financial impact per company was nearly a million dollars (\$925,816). Thirty-eight percent of respondents said that visa delays caused projects to be postponed, 42% said the delays prevented them from bringing foreign employees to the United States, and 20% said training events had to be relocated outside the country.

The direct-sales giant Amway, for instance, chose to hold a convention for its 8,000 South Korean distributors in Japan this year rather than in Los Angeles or Hawaii, the *Washington Post* recently reported, because the United States would require each visitor to go through an individual interview with a consular official. Amway estimated that the attendees would have spent, on average, \$1,250—translating into a \$10 million loss for the potential host city.

According to a recent *New York Times* article, 6.3 million people applied for U.S. visas between October 2000 and September 2001. But in fiscal 2003, that number dropped more than 40% to 3.7 million. And fewer of those who are applying are getting in. The rejection rate for H-1B visas (also called “high-skilled visas”), which allow professionals who are not U.S. citizens to work in the country for up to six years, increased from 9.5% to 17.8% between 2001 and 2003. Almost every major American industry from high-tech to entertainment is feeling the repercussions of these decisions. A number of prominent

Over time, terrorism is less a threat to the U.S. than the possibility that creative and talented people will stop wanting to live within its borders.

students could mean. At a May 2004 luncheon for the United States Senate Science and Technology Caucus, he commented: “Applications to many leading U.S. graduate schools from students in China, India, Russia, and elsewhere are already down by 30% or more, and there is evidence that these students are going elsewhere for advanced degrees. International scientific organizations, such as the International Union of Pure and Applied Physics, are refusing to hold conferences here.” As one oceanographer from the University of California

stakes are growing. In 2000, UNESCO estimates, 1.7 million students worldwide were educated abroad; by 2025, it expects that number will swell to more than 8 million. The countries that attract these students will have a huge advantage in the coming war for global talent.

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imagination at work

international music groups, such as Cuba's Sierra Maestra, have canceled American tours because they were refused visas. (Sierra Maestra was denied a visa when the FBI failed to complete background checks fast enough to meet INS deadlines.) These cancellations in and of themselves won't have a big impact on the U.S. economy, but think of the influence on American artists, let alone on the multibillion-dollar music business. Choking musicians and businesspeople off from those on the frontiers of this ever-evolving (and increasingly global) industry will eventually yield the same result as prohibiting scientists from carrying out potentially rewarding research. It will dull their competitive edge.

Foreign professionals already working in U.S. firms aren't having an easy go of it either. Processing times for renewing green cards and travel documents have reached glacial proportions. As the *Times* also reports, it now takes an average of 19 months to replace a lost green card. It takes seven months for legal workers in the U.S. whose green cards are pending to get travel papers – and during that period, the applicants cannot leave the country or they risk not being able to reenter. The same article claims that the number of pending green card applications has jumped by nearly 60% since 2001 because 1,000 agents who once issued documents have been reassigned to do “extensive security checks of every applicant instead.”

There's no denying how important foreign-born workers are to the U.S. economy. AnnaLee Saxenian, dean of the School of Information Management and Systems at the University of California, Berkeley, conducted extensive research on immigrant-run companies in Silicon Valley. She and her team pored over census data on immigrants' education, occupations, and earnings, and they used a Dun & Bradstreet database to distill immigrant-run companies from the nearly 12,000 start-ups launched between 1980 and 1998. They found that Chinese and Indian engineers were running nearly 30% of the area's high-tech companies in the 1990s – up from 13%

in the early 1980s. Saxenian estimated that in 2000, these firms collectively accounted for nearly \$20 billion in sales and more than 70,000 jobs. And because Saxenian's database identified only those companies that are currently headed by a Chinese or Indian chief executive, she suspects her figures are conservative.

Trends are eye-opening, but individual cases are perhaps even more important. What if, for example, Vinod Khosla, the cofounder of Sun Microsystems and venture capital luminary who has backed so many blockbuster companies, had stayed in India? Or if An Wang, founder of Wang Laboratories, had gone to university in Europe? These are people whose creative genius has affected the trajectory of entire industries; their breakthroughs and business acumen have helped set in motion what the economist Joseph Schumpeter liked to call the “gales of creative destruction” that create new companies and industries and completely remake existing ones.

This circle-the-wagons mentality is even causing some leading American scientists and engineers to leave the

country. If the status quo remains, then more people may react like Roger Pedersen, a stem cell researcher, who left the University of California, San Francisco, for Cambridge University. “I have a soft spot in my heart for America, but the UK is much better for this research. More working capital,” Pedersen told *Wired*, “They haven't made such a political football out of stem cells.” These tendencies illustrate on a small scale how the creative economy is being reshaped – both by global competitors' increasing savvy and by America's shortsightedness.

Rebuilding the Creative Infrastructure

What should the United States do? First, it must recognize that the issue is non-partisan. Republicans, Democrats, independents – everyone has a stake in keeping the country open to foreign talent. The challenges the nation must overcome are too massive for the debate about them to become overshadowed by polarizing political bickering, culture wars, or short-term economic agendas. The United States must consider its next steps carefully and delib-



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erately. I recommend focusing on three main areas.

Calculate the true cost of security. The United States is impeding its own progress when it makes scientific discovery pass religious tests or when it tightens visa restrictions unnecessarily. To be certain, America after September 11 does face real and vital threats to its security, and they are not going to disappear anytime soon. The departments of Defense and Homeland Security, the

competitiveness to public attention. The private sector can similarly take the lead now by establishing a Global Creativity Commission—a coalition of world political and business leaders committed to developing strategies to ensure that global talent can move efficiently across borders.

Invest generously in research and education. Corporate R&D funding dropped by nearly \$8 billion in 2002—the largest single-year decline since the

way it built the canals, railroads, and highways to power industrial growth, the United States has to build the creative infrastructure for the future.

Here again, business and academia may need to take the lead, at least in the short run. In response to the recent restrictions on federal funding for stem cell research, Lawrence Summers announced plans earlier this year to launch a multimillion-dollar Harvard Stem Cell Institute. Says George Q. Daley, an associate professor at Harvard Medical School and Children's Hospital, "Harvard has the resources, Harvard has the breadth, and, frankly, Harvard has the responsibility to take up the slack that the government is leaving."

Tap into more people's creative capabilities. If the creative class in America accounts for less than a third of the workforce, then, of course, the vast majority is not part of it. Nearly 45% of the U.S. workforce falls into the service class, for instance—janitors, low-end health care workers, office clerks, food service workers, and the like. Members of this class earn, on average, less than half of what creative-class members do—around \$22,000 a year versus more than \$50,000.

Employing so many citizens in non-creative ways is a terrible waste of talent and potential. So far, the U.S. has gotten away with it because few other societies do much better. But remember what happened in the 1970s and 1980s, when Japanese auto companies leaped to global prominence with manufacturing methods that tapped the intelligence of every worker on the factory floor to make continuous improvements in quality and productivity. U.S. manufacturers—stuck in the old Taylorist model, in which the engineers made the decisions and the laborers simply carried out the rote work—nearly had their doors blown off. If other nations develop better ways to harness their societies' creativity, the U.S. economy might be blown away on an inconceivable scale.

The United States needs to substantially upgrade the pay, working conditions, and status of the huge number of

The U.S. needs to upgrade the huge number of service jobs its economy is generating. These are the port-of-entry jobs to the creative economy of today.

FBI, the Coast Guard, and the intelligence agencies naturally think in terms of security first. That is their job. But it is important for both business and political leadership to recognize the economic costs of overzealousness and to weigh carefully the serious trade-offs between current security and long-run competitiveness.

People around the world applaud America's efforts to improve its own security. But what the world does not like is the arbitrary and sometimes brash methods the country has adopted in its own defense. Over time, terrorism is less a threat to the United States than the possibility that creative and talented people will stop wanting to live within its borders. The nation must act in concrete ways to reassure people—both Americans and global citizens—that it values openness, diversity, and tolerance. To that end, it must focus on improving the visa process immediately.

If the government is unable or unwilling to take the lead in balancing one type of security with another, then the business and academic communities need to push for a renewed American openness. In the 1980s, Hewlett-Packard chief Jack Young spurred his colleagues to form the U.S. Council on Competitiveness, which did much to bring the country's lagging industrial

1950s, the National Science Foundation reports. And right now, the federal government is cutting key areas of defense R&D spending. Many state governments have slashed higher education funding for arts and culture while pumping millions into stadiums, convention centers, and other bricks-and-mortar projects. Never mind that the local economic benefits of such projects often dry up the minute the last construction worker drives off the site. These choices signal a profound failure to understand what's required to maintain an atmosphere of innovation.

The United States must invest generously in its creative infrastructure. Education reform must, at its core, make schools into places that cultivate creativity. Americans revel in the legendary stories of young creators like Michael Dell building new businesses in dorm rooms or in garages in their spare time. The question is: Why are they doing these things in their *spare* time? Isn't this the real stuff of education in the Creative Age?

What's needed is the equivalent of a GI Bill for creativity. The nation must spend radically more on research and development and on higher education, opening up universities and colleges to more Americans and to more of the world's best and brightest. In the same

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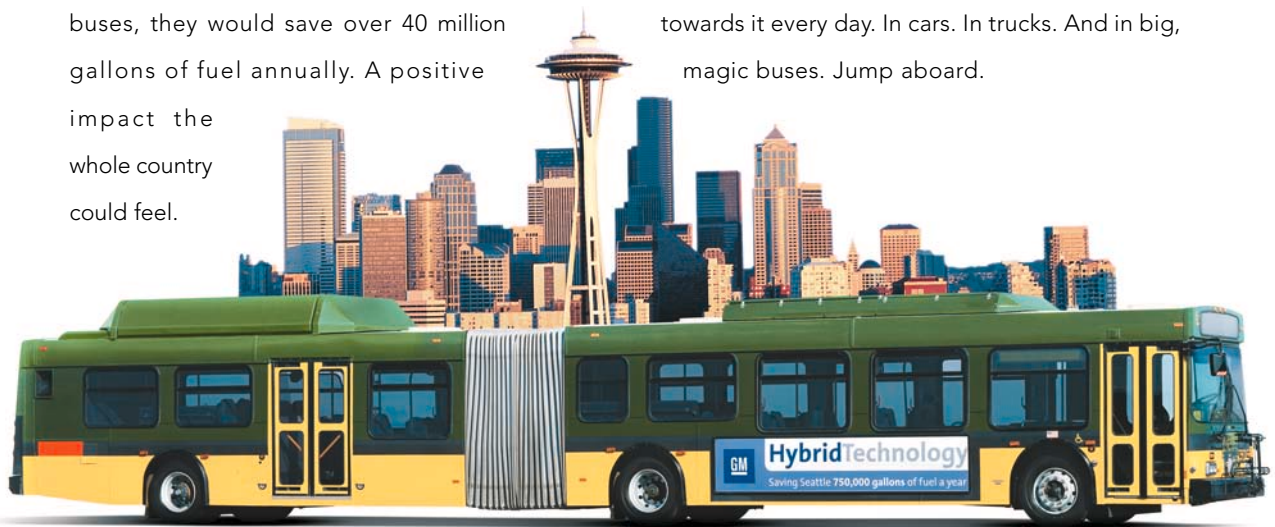
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service jobs its economy is generating. These are the port-of-entry jobs to the creative economy of today. During the Great Depression and the New Deal, the nation succeeded in turning a large number of formerly low-skill, low-pay, blue-collar jobs into the kind of occupations that could support families and become the launchpad for upward mobility. And many of the equivalent jobs today – hairdressing, massage therapy, and aestheticians, to name only a few – are virtually impervious to outsourcing.

Addressing the needs of the American creative class will be important, but it won't be enough. To prevent widespread social unrest and to benefit economically from the creative input of the maximum number of its citizens, the United States will have to find ways to bring the service and manufacturing sectors more fully into the Creative Age.

The Future of Global Creativity

Maybe I'm an eternal optimist, but I think the United States can continue to be a beacon of openness for the creative class – and, indeed, for the whole of humanity. It has a long history of resourcefulness and creativity to draw on, and it has transformed itself many times before, rebuilding after the Great Depression and bouncing back after the Asian manufacturing boom of the 1980s.

Unfortunately, America's eroding access to high-level foreign talent hasn't drawn much attention from political leaders or from the media. They have seemingly bigger and more immediate problems – from the war on terrorism to the loss of manufacturing jobs to China, India, and Mexico. But the nation is overlooking the biggest threat to its economic well-being – just as it did when its obsession with the Soviet Union in the last years of the Cold War caused it to miss the economic challenge of Japan.

The role of the United States in generating creativity and human capital is a concern not only for U.S. businesses and policy makers but for all nations. American universities and corporations have long been the educators and innovators for the world. If this engine stalls – or if

Creative Regions

Competition for talent occurs not only between nations but also between cities and regions, just as competition in many industries occurs at the business-unit, rather than the company, level. New York, for instance, is pitted against London and Hong Kong; San Francisco is up against the likes of Dublin, Vancouver, Stockholm, and Sydney. While comprehensive regional data do not exist, several studies do give a detailed picture of areas inside Canada and Australia.

According to data amassed by Kevin Stolarick, Meric Gertler, Gary Gates, and Tara Vinodrai, the percentage of workers in the creative classes in Toronto (36.4%), Montreal (35.0%), and Vancouver (35.2%) rival those in the leading American regions. Of America's ten most populous regions, only the Washington, DC (39.8%), and Boston (36.5%) areas do better. Toronto and Vancouver have the highest concentration of immigrants in North America, with 43.7% and 37.5% of their respective populations hailing from other countries. By comparison only 24.4% of New Yorkers were born outside the United States and only 30.9% of Los Angelenos. Of course, percentages don't give the full picture. The sheer number of creative-class members found in a metropolis like New York is far greater than in, say, Toronto. But the percentages do shed light on which cities are fostering creative cultures and will, therefore, be attractive to more creative types in the future.

Australia's leading regions are also well poised to compete as global creative centers, according to detailed benchmarking data compiled by the National Institute of Economic and Industry Research. Its two largest regions, Sydney and Melbourne, would rank approximately fourth or fifth if they were U.S. regions. Their creative classes are similar in size to those of Boston or Seattle. The Australian study compiled data for particular inner-city neighborhoods, as well. Creative occupations make up fully half the workforce in both central Sydney (51.1%) and central Melbourne (49.5%) – far greater than in virtually any inner city in the U.S. Both of these centers have high percentages of immigrants – 42.5% and 35.6% respectively – and are hotbeds of fine art, fashion, music, and street culture.

These and many other cities outside the United States boast additional attractions – stunning natural landscapes, world-class beaches, extensive recreational enticements. An added plus: They're rarely at war with anyone. These cities are fast becoming the global equivalents of Austin, Texas – transforming themselves from small, relatively obscure outposts into creative centers capable of luring talent from around the world.

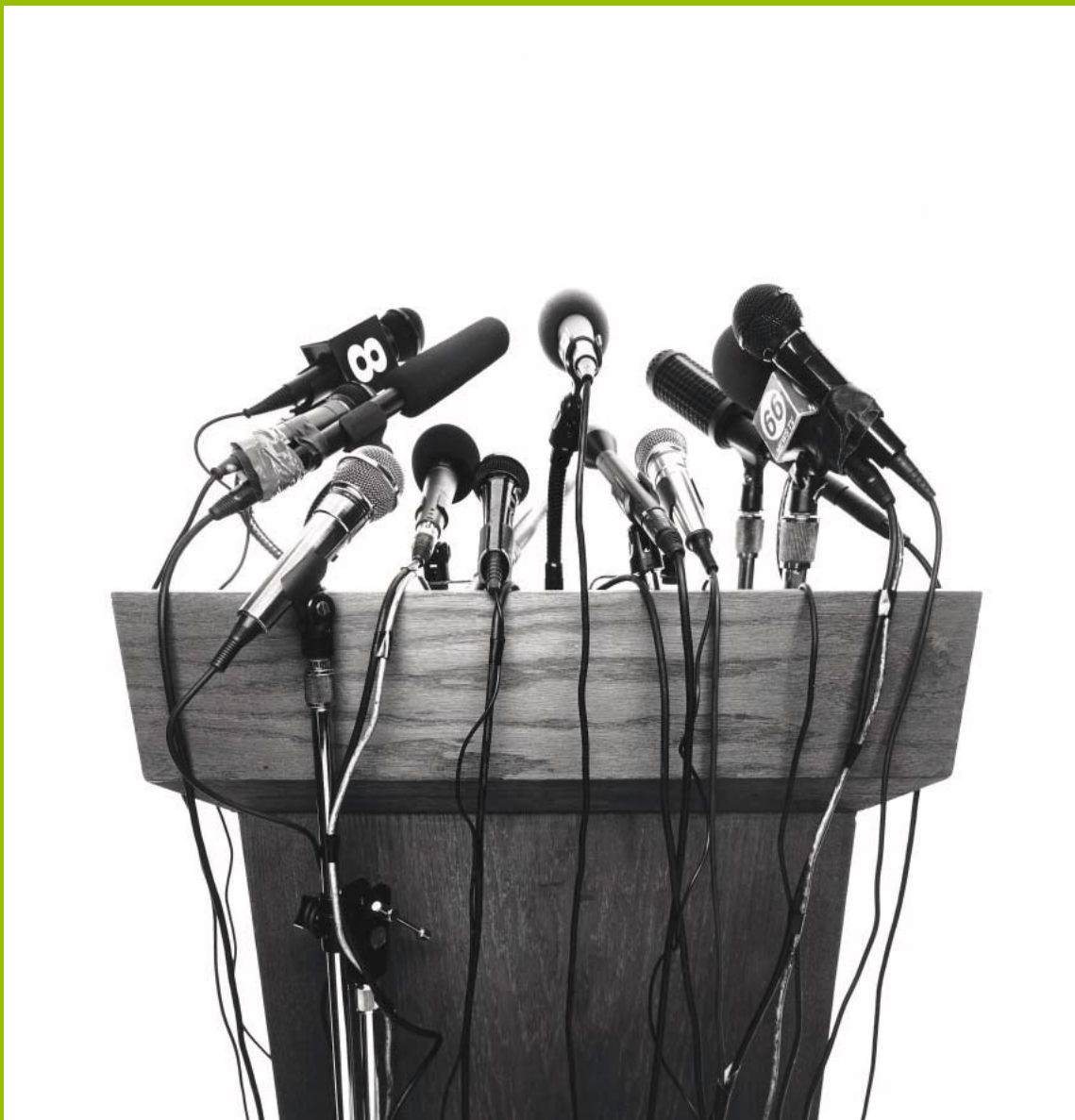
political decisions about immigration, visas, and scientific research put sugar in its gas tank – the whole world will have to live with the repercussions.

The Creative Age requires nothing short of a change of worldview. Creativity is not a tangible asset like mineral deposits, something that can be hoarded or fought over, or even bought and

sold. The U.S. must begin to think of creativity as a "common good," like liberty or security. It is something essential that belongs to everyone and must always be nourished, renewed, and maintained – or else it will slip away. 

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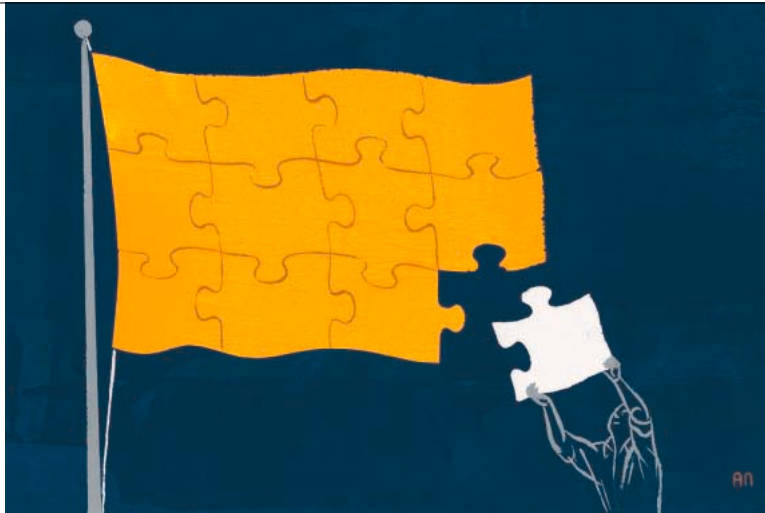
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Cultural Intelligence

by P. Christopher Earley and Elaine Mosakowski

YOU SEE THEM at international airports like Heathrow: posters advertising the global bank HSBC that show a grasshopper and the message “USA–Pest. China–Pet. Northern Thailand–Appetizer.”

Taxonomists pinned down the scientific definition of the family Acrididae more than two centuries ago. But culture is so powerful it can affect how even a lowly insect is perceived. So it should come as no surprise that the human actions, gestures, and speech patterns a person encounters in a foreign business setting are subject to an even wider range of interpretations, including ones that can make misunderstandings likely and cooperation impossible. But occasionally an outsider has a seemingly natural ability to interpret someone’s unfamiliar and ambiguous gestures in just the way that person’s compatriots and colleagues would,

even to mirror them. We call that *cultural intelligence* or *CQ*. In a world where crossing boundaries is routine, CQ becomes a vitally important aptitude and skill, and not just for international bankers and borrowers.

Companies, too, have cultures, often very distinctive; anyone who joins a new company spends the first few weeks deciphering its cultural code. Within any large company there are sparring subcultures as well: The sales force can’t talk to the engineers, and the PR people lose patience with the lawyers. Departments, divisions, professions, geographical regions—each has a constellation of manners, meanings, histories, and values that will confuse the interloper and cause him or her to stumble. Unless, that is, he or she has a high CQ.

Cultural intelligence is related to emotional intelligence, but it picks up where emotional intelligence leaves off.

A person with high emotional intelligence grasps what makes us human and at the same time what makes each of us different from one another. A person with high cultural intelligence can somehow tease out of a person's or group's behavior those features that would be true of all people and all groups, those peculiar to this person or this group, and those that are neither universal nor idiosyncratic. The vast realm that lies between those two poles is culture.

An American expatriate manager we know had his cultural intelligence tested while serving on a design team that included two German engineers. As other team members floated their ideas, the engineers condemned them repeatedly as stunted or immature or worse. The manager concluded that Germans in general are rude and aggressive.

A modicum of cultural intelligence would have helped the American realize he was mistakenly equating the merit of an idea with the merit of the person presenting it and that the Germans were able to make a sharp distinction

reaction to the engineers' conduct, and proposed a new style of discussion that preserved candor but spared feelings, if indeed anyone's feelings had been hurt. But without being able to tell how much of the engineers' behavior was idiosyncratic and how much was culturally determined, he or she would not have known how to influence their actions or how easy it would be to do that.

One critical element that cultural intelligence and emotional intelligence do share is, in psychologist Daniel Goleman's words, "a propensity to suspend judgment—to think before acting." For someone richly endowed with CQ, the suspension might take hours or days, while someone with low CQ might have to take weeks or months. In either case, it involves using your senses to register all the ways that the personalities interacting in front of you are different from those in your home culture yet similar to one another. Only when conduct you have actually observed begins to settle into patterns can you safely begin to anticipate how these people

alert, motivated, and poised can attain an acceptable level of cultural intelligence, as we have learned from surveying 2,000 managers in 60 countries and training many others. Given the number of cross-functional assignments, job transfers, new employers, and distant postings most corporate managers are likely to experience in the course of a career, low CQ can turn out to be an inherent disadvantage.

The Three Sources of Cultural Intelligence

Can it really be that some managers are socially intelligent in their own settings but ineffective in culturally novel ones? The experience of Peter, a sales manager at a California medical devices group acquired by Eli Lilly Pharmaceuticals, is not unusual. At the devices company, the atmosphere had been mercenary and competitive; the best-performing employees could make as much in performance bonuses as in salary. Senior managers hounded unproductive salespeople to perform better.

At Lilly's Indianapolis headquarters, to which Peter was transferred, the sales staff received bonuses that accounted for only a small percentage of total compensation. Furthermore, criticism was restrained and confrontation kept to a minimum. To motivate people, Lilly management encouraged them. Peter commented, "Back in L.A., I knew how to handle myself and how to manage my sales team. I'd push them and confront them if they weren't performing, and they'd respond. If you look at my evaluations, you'll see that I was very successful and people respected me. Here in Indianapolis, they don't like my style, and they seem to avoid the challenges that I put to them. I just can't seem to get things done as well here as I did in California."

Peter's problem was threefold. First, he didn't comprehend how much the landscape had changed. Second, he was unable to make his behavior consistent with that of everyone around him. And third, when he recognized that the arrangement wasn't working, he became disheartened.

Cultural intelligence: an outsider's seemingly natural ability to interpret someone's unfamiliar and ambiguous gestures the way that person's compatriots would.

between the two. A manager with even subtler powers of discernment might have tried to determine how much of the two Germans' behavior was arguably German and how much was explained by the fact that they were engineers.

An expatriate manager who was merely emotionally intelligent would probably have empathized with the team members whose ideas were being criticized, modulated his or her spontaneous

will react in the next situation. The inferences you draw in this manner will be free of the hazards of stereotyping.

The people who are socially the most successful among their peers often have the greatest difficulty making sense of, and then being accepted by, cultural strangers. Those who fully embody the habits and norms of their native culture may be the most alien when they enter a culture not their own. Sometimes, people who are somewhat detached from their own culture can more easily adopt the mores and even the body language of an unfamiliar host. They're used to being observers and making a conscious effort to fit in.

Although some aspects of cultural intelligence are innate, anyone reasonably

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Peter's three difficulties correspond to the three components of cultural intelligence: the cognitive; the physical; and the emotional/motivational. Cultural intelligence resides in the body and the heart, as well as the head. Although most managers are not equally strong in all three areas, each faculty is seriously hampered without the other two.

Head. Rote learning about the beliefs, customs, and taboos of foreign cultures, the approach corporate training programs tend to favor, will never prepare a person for every situation that arises, nor will it prevent terrible gaffes. However, inquiring about the meaning of some custom will often prove unavailing because natives may be reticent about explaining themselves to strangers, or they may have little practice looking at their own culture analytically.

Instead, a newcomer needs to devise what we call learning strategies. Although most people find it difficult to discover a point of entry into alien cultures, whose very coherence can make them seem like separate, parallel worlds, an individual with high cognitive CQ notices clues to a culture's shared understandings. These can appear in any form and any context but somehow indicate a line of interpretation worth pursuing.

An Irish manager at an international advertising firm was working with a new client, a German construction and engineering company. Devin's experience with executives in the German retail clothing industry was that they were reasonably flexible about deadlines and receptive to highly imaginative proposals for an advertising campaign. He had also worked with executives of a British construction and engineering company, whom he found to be strict about deadlines and intent on a media campaign that stressed the firm's technical expertise and the cost savings it offered.

Devin was unsure how to proceed. Should he assume that the German construction company would take after the German clothing retailer or, instead, the British construction company? He resolved to observe the new client's representative closely and draw general conclusions about the firm and its culture



from his behavior, just as he had done in the other two cases. Unfortunately, the client sent a new representative to every meeting. Many came from different business units and had grown up in different countries. Instead of equating the first representative's behavior with the client's corporate culture, Devin looked for consistencies in the various individuals' traits. Eventually he determined that they were all punctual, deadline-oriented, and tolerant of unconventional advertising messages. From that, he was able to infer much about the character of their employer.

Body. You will not disarm your foreign hosts, guests, or colleagues simply by showing you understand their cul-

ture; your actions and demeanor must prove that you have already to some extent entered their world. Whether it's the way you shake hands or order a coffee, evidence of an ability to mirror the customs and gestures of the people around you will prove that you esteem them well enough to want to be like them. By adopting people's habits and mannerisms, you eventually come to understand in the most elemental way what it is like to be them. They, in turn, become more trusting and open. University of Michigan professor Jeffrey Sanchez-Burks's research on cultural barriers in business found that job candidates who adopted some of the mannerisms of recruiters with cultural back-

grounds different from their own were more likely to be made an offer.

This won't happen if a person suffers from a deep-seated reservation about the called-for behavior or lacks the physical poise to pull it off. Henri, a French manager at Aegis, a media corporation, followed the national custom of greeting his female clients with a hug and a kiss on both cheeks. Although Melanie, a British aerospace manager, understood that in France such familiarity was *de rigueur* in a professional setting, she couldn't suppress her discomfort when it happened to her, and she recoiled. Inability to receive and reciprocate gestures that are culturally characteristic reflects a low level of cultural intelligence's physical component.

In another instance, a Hispanic community leader in Los Angeles and an Anglo-American businessman fell into conversation at a charity event. As the former moved closer, the latter backed away. It took nearly 30 minutes of waltzing around the room for the community leader to realize that "Anglos" were not comfortable standing in such close physical proximity.

Heart. Adapting to a new culture involves overcoming obstacles and setbacks. People can do that only if they believe in their own efficacy. If they persevered in the face of challenging situations in the past, their confidence grew. Confidence is always rooted in mastery of a particular task or set of circumstances.

A person who doesn't believe herself capable of understanding people from unfamiliar cultures will often give up after her efforts meet with hostility or incomprehension. By contrast, a person with high motivation will, upon confronting obstacles, setbacks, or even failure, reengage with greater vigor. To stay motivated, highly efficacious people do not depend on obtaining rewards, which may be unconventional or long delayed.

Hyong Moon had experience leading racially mixed teams of designers at GM, but when he headed up a product design and development team that included representatives from the sales, production, marketing, R&D, engineer-

ing, and finance departments, things did not go smoothly. The sales manager, for example, objected to the safety engineer's attempt to add features such as side-impact air bags because they would boost the car's price excessively. The

conflict became so intense and so public that a senior manager had to intervene. Although many managers would have felt chastened after that, Moon struggled even harder to gain control, which he eventually did by convincing the sales manager that the air bags could make the car more marketable. Although he had no experience with cross-functional teams, his successes with single-function teams had given him the confidence to persevere. He commented, "I'd seen these types of disagreements in other teams, and I'd been able to help team members overcome their differences, so I knew I could do it again."

How Head, Body, and Heart Work Together

At the end of 1997, U.S.-based Merrill Lynch acquired UK-based Mercury Asset Management. At the time of the merger, Mercury was a decorous, understated, hierarchical company known for doing business in the manner of an earlier generation. Merrill, by contrast, was informal, fast-paced, aggressive, and entrepreneurial. Both companies had employees of many nationalities. Visiting Mercury about six months after the merger announcement, we were greeted by Chris, a Mercury personnel manager dressed in khakis and a knit shirt. Surprised by the deviation from his usual uniform of gray or navy pinstripes, we asked him what had happened. He told us that Merrill had instituted casual Fridays in its own offices and then extended the policy on a volunteer basis to its UK sites.

Chris understood the policy as Merrill's attempt to reduce hierarchical distinctions both within and between the companies. The intention, he thought, was to draw the two enterprises closer together. Chris also identified a liking

People who are somewhat detached from their own culture can more easily adopt the mores and even the body language of an unfamiliar host.

for casual dress as probably an American cultural trait.

Not all Mercury managers were receptive to the change, however. Some went along with casual Fridays for a few weeks, then gave up. Others never doffed their more formal attire, viewing the new policy as a victory of carelessness over prudence and an attempt by Merrill to impose its identity on Mercury, whose professional dignity would suffer as a result. In short, the Mercury resisters did not understand the impulse behind the change (head); they could not bring themselves to alter their appearance (body); and they had been in the Mercury environment for so long that they lacked the motivation (heart) to see the experiment through. To put it even more simply, they dreaded being mistaken for Merrill executives.

How would you behave in a similar situation? The exhibit "Diagnosing Your Cultural Intelligence" allows you to assess the three facets of your own cultural intelligence and learn where your relative strengths and weaknesses lie. Attaining a high absolute score is not the objective.

Cultural Intelligence Profiles

Most managers fit at least one of the following six profiles. By answering the questions in the exhibit, you can decide which one describes you best.

The provincial can be quite effective when working with people of similar background but runs into trouble when venturing farther afield. A young engineer at Chevrolet's truck division received positive evaluations of his tech-

Diagnosing Your Cultural Intelligence

These statements reflect different facets of cultural intelligence. For each set, add up your scores and divide by four to produce an average. Our work with large groups of managers shows that for purposes of your own development, it is most useful to think about your three scores in comparison to one another. Generally, an average of less than 3 would indicate an area calling for improvement, while an average of greater than 4.5 reflects a true CQ strength.

Rate the extent to which you agree with each statement, using the scale:

1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

		Before I interact with people from a new culture, I ask myself what I hope to achieve.
		If I encounter something unexpected while working in a new culture, I use this experience to figure out new ways to approach <i>other</i> cultures in the future.
		I plan how I'm going to relate to people from a different culture before I meet them.
+		When I come into a new cultural situation, I can immediately sense whether something is going well or something is wrong.
Total		÷ 4 = Cognitive CQ

		It's easy for me to change my body language (for example, eye contact or posture) to suit people from a different culture.
		I can alter my expression when a cultural encounter requires it.
		I modify my speech style (for example, accent or tone) to suit people from a different culture.
+		I easily change the way I act when a cross-cultural encounter seems to require it.
Total		÷ 4 = Physical CQ

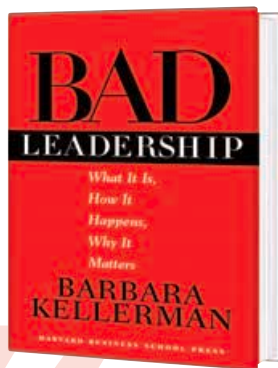
		I have confidence that I can deal well with people from a different culture.
		I am certain that I can befriend people whose cultural backgrounds are different from mine.
		I can adapt to the lifestyle of a different culture with relative ease.
+		I am confident that I can deal with a cultural situation that's unfamiliar.
Total		÷ 4 = Emotional/ motivational CQ

nical abilities as well as his interpersonal skills. Soon he was asked to lead a team at Saturn, an autonomous division of GM. He was not able to adjust to Saturn's highly participative approach to teamwork – he mistakenly assumed it would be as orderly and deferential as Chevy's. Eventually, he was sent back to Chevy's truck division.

The analyst methodically deciphers a foreign culture's rules and expectations by resorting to a variety of elaborate learning strategies. The most common form of analyst realizes pretty quickly he is in alien territory but then ascertains, usually in stages, the nature of the patterns at work and how he should interact with them. Deirdre, for example, works as a broadcast director for a London-based company. Her principal responsibility is negotiating contracts with broadcast media owners. In June 2002, her company decided that all units should adopt a single negotiating strategy, and it was Deirdre's job to make sure this happened. Instead of forcing a showdown with the managers who resisted, she held one-on-one meetings in which she probed their reasons for resisting, got them together to share ideas, and revised the negotiating strategy to incorporate approaches they had found successful. The revised strategy was more culturally flexible than the original proposal – and the managers chose to cooperate.

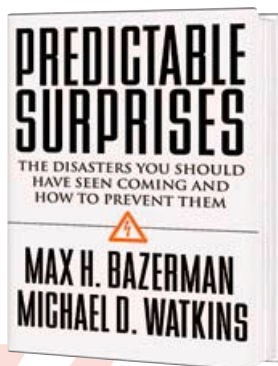
The natural relies entirely on his intuition rather than on a systematic learning style. He is rarely steered wrong by first impressions. Donald, a brand manager for Unilever, commented, "As part of my job, I need to judge people from a wide variety of cultural backgrounds and understand their needs quickly. When I come into a new situation, I watch everyone for a few minutes and then I get a general sense of what is going on and how I need to act. I'm not really sure how I do it, but it seems to work." When facing ambiguous multicultural situations that he must take control of, the natural may falter because he has never had to improvise learning strategies or cope with feelings of disorientation.

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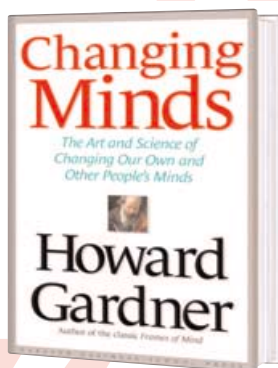
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The ambassador, like many political appointees, may not know much about the culture he has just entered, but he convincingly communicates his certainty that he belongs there. Among the managers of multinational companies we have studied, the ambassador is the most common type. His confidence is

a very powerful component of his cultural intelligence. Some of it may be derived from watching how other managers have succeeded in comparable situations. The ambassador must have the humility to know what he doesn't know – that is, to know how to avoid underestimating cultural differences,

Confidence Training

Helmut was a manager at a Berlin-based high-tech company who participated in our cultural-intelligence training program at London Business School. Three months earlier, he had been assigned to a large manufacturing facility in southern Germany to supervise the completion of a new plant and guide the local staff through the launch. Helmut came from northern Germany and had never worked in southern Germany; his direct reports had been raised in southern Germany and had worked for the local business unit for an average of seven years.

Helmut was good at developing new learning strategies, and he wasn't bad at adapting his behavior to his surroundings. But he had low confidence in his ability to cope with his new colleagues. To him, southern Germans were essentially foreigners; he found them "loud, brash, and cliquish."

To capitalize on his resourcefulness and build his confidence, we placed Helmut in heterogeneous groups of people, whom we encouraged to engage in freewheeling discussions. We also encouraged him to express his emotions more openly, in the manner of his southern compatriots, and to make more direct eye contact in the course of role-playing exercises.

Helmut's resourcefulness might have impelled him to take on more ambitious tasks than he could quite handle. It was important he get his footing first, so that some subsequent reversal would not paralyze him. To enhance his motivational CQ, we asked him to list ten activities he thought would be part of his daily or weekly routine when he returned to Munich.

By the time Helmut returned to London for his second training session, he had proved to himself he could manage simple encounters like getting a coffee, shopping, and having a drink with colleagues. So we suggested he might be ready for more challenging tasks, such as providing face-to-face personnel appraisals. Even though Helmut was skilled at analyzing people's behavior, he doubted he was equal to this next set of hurdles. We encouraged him to view his analytic skills as giving him an important advantage. For example, Helmut had noticed that Bavarians were extroverted only with people familiar to them. With strangers they could be as formal as any Prussian. Realizing this allowed him to respond flexibly to either situation instead of being put off balance.

By the time he was asked to lead a quality-improvement team, he had concluded that his leadership style must unfold in two stages – commanding at the outset, then more personal and inclusive. On his third visit to London, Helmut reported good relations with the quality improvement team, and the members corroborated his assessment.

even though doing so will inflict a degree of discomfort.

The mimic has a high degree of control over his actions and behavior, if not a great deal of insight into the significance of the cultural cues he picks up. Mimicry definitely puts hosts and guests at ease, facilitates communication, and builds trust. Mimicry is not, however, the same as pure imitation, which can be interpreted as mocking. Ming, a manager at the Shanghai regional power authority, relates, "When I deal with foreigners, I try to adopt their style of speaking and interacting. I find that simple things like keeping the right distance from the other person or making eye contact or speaking English at a speed that matches the other person's puts them at ease and makes it easier to make a connection. This really makes a difference to newcomers to China because they often are a bit threatened by the place."

The chameleon possesses high levels of all three CQ components and is a very

uncommon managerial type. He or she even may be mistaken for a native of the country. More important, chameleons don't generate any of the ripples that unassimilated foreigners inevitably do. Some are able to achieve results that natives cannot, due to their insider's skills and outsider's perspective. We found that only about 5% of the managers we surveyed belonged in this remarkable category.

One of them is Nigel, a British entrepreneur who has started businesses in Australia, France, and Germany. The son of diplomats, Nigel grew up all over the world. Most of his childhood, however, was spent in Saudi Arabia. After several successes of his own, some venture capitalists asked him to represent them in dealings with the founder of a money-losing Pakistani start-up.

To the founder, his company existed chiefly to employ members of his extended family and, secondarily, the citizens of Lahore. The VCs, naturally, had a different idea. They were tired of

losses and wanted Nigel to persuade the founder to close down the business.

Upon relocating to Lahore, Nigel realized that the interests of family and community were not aligned. So he called in several community leaders, who agreed to meet with managers and try to convince them that the larger community of Lahore would be hurt if potential investors came to view it as full of businesspeople unconcerned with a company's solvency. Nigel's Saudi upbringing had made him aware of Islamic principles of personal responsibility to the wider community, while his British origins tempered what in another person's hands might have been the mechanical application of those tenets. Throughout the negotiations, he displayed an authoritative style appropriate to the Pakistani setting. In relatively short order, the managers and the family agreed to terminate operations.

Many managers, of course, are a hybrid of two or more of the types. We discovered in our survey of more than

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2,000 managers that even more prevalent than the ambassador was a hybrid of that type and the analyst. One example was a female African-American manager in Cairo named Brenda, who was insulted when a small group of young, well-meaning Egyptian males greeted her with a phrase they'd learned from rap music.

"I turned on my heel, went right up to the group and began upbraiding them as strongly as my Arabic would allow," she said. "When I'd had my say, I stormed off to meet a friend."

"After I had walked about half a block, I registered the shocked look on their faces as they listened to my words. I then realized they must have thought they were greeting me in a friendly way. So I went back to talk to the group. They asked me why I was so angry, I explained, they apologized profusely, and we all sat down and had tea and an interesting talk about how the wrong words can easily cause trouble. During our conversation, I brought up a number of examples of how Arabic expressions uttered in the wrong way or by the wrong person could spark an equivalent reaction in them. After spending about an hour with them, I had some new friends."

Brenda's narrative illustrates the complexities and the perils of cross-cultural interactions. The young men had provoked her by trying, ineptly, to ingratiate themselves by using a bit of current slang from her native land. Forgetting in her anger that she was the stranger, she berated them for what was an act of cultural ignorance, not malice. Culturally uninformed mimicry got the young men in trouble; Brenda's – and the men's – cognitive flexibility and willingness to reengage got them out of it.

Cultivating Your Cultural Intelligence

Unlike other aspects of personality, cultural intelligence can be developed in psychologically healthy and professionally competent people. In our work with Deutsche Bank, we introduced a program to improve managers' work relationships with outsourcing partners in

India. We developed a two-and-a-half day program that first identified a participant's strengths and weaknesses and then provided a series of steps, which we outline below, to enhance their CQ.

Step 1. The individual examines his CQ strengths and weaknesses in order to establish a starting point for subsequent development efforts. Our self-assessment instrument is one approach, but there are others, such as an assessment of a person's behavior in a simulated business encounter and 360-degree feedback on a person's past behavior in an actual situation. Hughes Electronics, for example, staged a cocktail party to eval-

uate an expatriate manager's grasp of South Korean social etiquette. Ideally, a manager will undergo a variety of assessments.

Step 2. The person selects training that focuses on her weaknesses. For example, someone lacking physical CQ might enroll in acting classes. Someone lacking cognitive CQ might work on developing his analogical and inductive reasoning—by, for example, reading several business case studies and distilling their common principles.

Step 3. The general training set out above is applied. If motivational CQ is low, a person might be given a series of simple exercises to perform, such as finding out where to buy a newspaper or greeting someone who has arrived to be interviewed. Mastering simple activities such as greetings or transactions with local shopkeepers establishes a solid base from which to move into more demanding activities, such as giving an employee a performance appraisal.

Step 4. The individual organizes her personal resources to support the approach she has chosen. Are there people at her organization with the skills to conduct this training, and does her work

unit provide support for it? A realistic assessment of her workload and the time available for CQ enhancement is important.

Step 5. The person enters the cultural setting he needs to master. He coordinates his plans with others, basing them on his CQ strengths and remaining weaknesses. If his strength is mimicry, for example, he would be among the first in his training group to venture forth. If his strength is analysis, he would first want to observe events unfold and then explain to the others why they followed the pattern they did.

Step 6. The individual reevaluates her newly developed skills and how effec-

You will not disarm your foreign hosts simply by showing you understand their culture; your actions must prove that you have entered their world.

tive they have been in the new setting, perhaps after collecting 360-degree feedback from colleagues individually or eavesdropping on a casual focus group that was formed to discuss her progress. She may decide to undergo further training in specific areas.

In the sidebar "Confidence Training," we describe how we applied these six steps to the case of Helmut, one of five German managers we helped at their employer's behest as they coped with new assignments within and outside of Germany.

...

Why can some people act appropriately and effectively in new cultures or among people with unfamiliar backgrounds while others flounder? Our anecdotal and empirical evidence suggests that the answer doesn't lie in tacit knowledge or in emotional or social intelligence. But a person with high CQ, whether cultivated or innate, can understand and master such situations, persevere, and do the right thing when needed. 

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The Growth Boosters

Pankaj Ghemawat's excellent review of the recent business literature on growth ("The Growth Boosters," July–August 2004) contains a radical thought, one that deserves deep and public debate in the academic and management communities. While elegantly challenging the amount of recycling prevalent in business books, Ghemawat says: "Given the dearth of their own data, these



books might have paid more attention to academic research on the empirics of business growth."

Therein lies the radical thought: How much attention is paid to academic research in best-selling business books? And what is the role of academics in helping managers make decisions about the content of these books? In light of the amount of "fad surfing" going on,

where do practicing managers go for a peer review in plain English?

In *Harvard Business Review's* January 2004 issue, Inside the Mind of the Leader, one of the originators of the concept of emotional intelligence, psychology professor John D. Mayer, says the popular definition of emotional intelligence – as a loose collection of personality traits – has been accompanied by exaggerated claims about the concept's importance. Mayer goes on to say: "The danger lies in assuming that because a person is optimistic or confident, he or she is also emotionally intelligent, when, in fact, the presence of those traits will tell you nothing of the sort."

What does that say, when the originator of a concept directly challenges the validity of the popular claims made for it? I would bet that companies have, collectively, spent millions of dollars on various emotional intelligence assessments and workshops for their managers. But if emotional intelligence does not predict leadership effectiveness, or if it does so only marginally, what do we say to those potential and existing managers who have been given feedback based on an unproven concept? Is this not the ultimate in a lack of emotional intelligence?

As a manager, I need to be able to say to my people, "Don't invest in this; it is unproven," or "We should go with this; the research strongly supports it." Do I have to read dense academic journals to be able to do this? I've been in management education for 30 years, and I've seen companies spend millions on fads that weren't necessarily backed by

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empirics. Think of the research that could have been funded at Harvard Business School with all those millions.

If academics want businesses to invest in valid ideas, they must help managers bust the fads.

George Mann

*Managing Director
Learning Network Services
Geneva*

Ghemawat responds: George Mann's letter raises a fascinating point: What should we in academia do when we know that something isn't so? This is an issue in every field of inquiry, but in management – unlike most other non-technological fields – there literally is a large market for ideas. This market encourages the development of knowledge that will be relevant for practitioners, but it is also subject to incentive problems. In particular, the pure market mechanism can be expected to lead to less cumulative knowledge development than is socially optimal and to produce comparatively more faddishness over time.

We already have a hybrid system for developing management knowledge that is, in principle, capable of guaranteeing both relevance and rigor: The commercial sphere (which includes leading companies, consulting firms, and so on) is supposed to ensure the production of relevant ideas, while the academic sphere (which consists of researchers at business schools and elsewhere) is supposed to ensure rigor in the development and testing of those ideas. But synergy between these two spheres can materialize only if they are linked tightly enough to moderate each other's tendencies. This connection is unlikely to exist if an idea that is specifically controverted in the academic sphere continues to enjoy great currency in the commercial sphere.

I haven't followed the emotional-intelligence debate in enough detail to comment on the extent to which it reflects this kind of problem, but I can certainly think of other examples. For instance, managers' exaggerated faith in the value of market share (and, relat-

edly, in the value of economies of scale and industry concentration) has survived despite more than 20 years of academic research indicating that while market share may be a symptom of success, it is not a valid strategic goal in and of itself.

This kind of disconnect raises an interesting issue for gatekeepers such as *Harvard Business Review*. It is generally neither polite nor directly profitable for such gatekeepers to engage in fad busting of the sort that Mann talks about. And it is often hard for the fad busters themselves to get their works published; the academic journals, in particular, are generally inhospitable to such articles. Given the importance of establishing and maintaining a tight connection between the academic and commercial spheres, management-oriented publications may want to consider paying more attention to fad busting. It is, after all, of more than academic interest.

Selling to the Moneyed Masses

The article "Selling to the Moneyed Masses," by Paul F. Nunes, Brian A. Johnson, and R. Timothy S. Breene (July–August 2004), indicates that the income

First, Nunes and his coauthors base their conclusions about today's consumer market on gross income figures, not on after-tax dollars. If they worked with the latter, the after-tax income distribution curve would be closer to that from 1970. Since taxes are not disposable income, they should be subtracted from average household earnings to reflect the true consumer market.

Second, the authors don't factor home mortgages into their calculations. The principal portion of the mortgage probably doesn't show up as an expenditure, and the debt portion's claim on income is not subtracted from gross earnings. Once taxes and home mortgages are considered, the true state of disposable income is considerably different from that shown in the article. Indeed, the current high debt levels should be a cause for concern.

As Paul Harvey would say, we need the rest of the story to better understand the market trends. It may well be that after these two missing items are factored in, discretionary spending is much lower now than it was in 1970 – as indicated by Warren and Tyagi. Consumers don't have a lot of options for substituting goods and services for taxes, at least not legal ones. I would suggest



distribution curve is shifting out. Books such as *The Two-Income Trap*, by Elizabeth Warren and Amelia Warren Tyagi, indicate just the opposite. Why is there a discrepancy?

adjusting the curves for taxes and debt-servicing requirements for a more accurate read on consumer market trends.

Barry McIntyre

Calgary, Alberta, Canada

Nunes, Johnson, and Breene respond: Barry McIntyre raises some thought-provoking conjectures about the nature of household-spending potential. We regret that we did not provide greater clarity on this topic in our article.

While after-tax income may be a good measure of household-spending potential, the true value of after-tax income is extraordinarily difficult to measure. However, most attempts to do so have shown that, generally, taxes have not grown in such a way over the past 20 years as to absorb any of the mass-affluence effect we describe in the article.

The U.S. Congressional Budget Office's study of the effective federal tax rate in the United States since the 1970s shows that the rates for all quintiles of earners have remained virtually unchanged. In addition, the Census Bureau report from which we created our chart points out the need to adjust income figures not just for taxes but also for government cash and noncash transfers—for instance, the nontaxed portions of Social Security, corporate-subsidized health care, or food stamps.

The bureau creates an estimation of this type of income, which yields a set of income curves nearly identical to ours. The bureau concludes that when such adjustments are made, inequality among earners decreases, driven by gains in the lower quintiles of earners. This conclusion strengthens our fundamental argument for the emergence of mass affluence.

The U.S. Department of Labor's Consumer Expenditure Survey shows that consumer spending on housing (which includes mortgage payments, rents, home maintenance, and so on) has remained nearly constant for all household-income quintiles since 1984, the earliest year that data are available. So while the average home has grown much bigger in the past 20 years, the average household (by income quintile) is still paying roughly the same percentage of its income for the home.

At any rate, the shift in household income serves as a shorthand illustration of a more complex shift in affluence. To truly gauge household-spending capa-

bility, economists say, you must look at three measures: wealth, wages, and income (which includes capital gains). Each affects consumption and spending attitudes differently. In combination, they determine actual household-spending and consumption attitudes. Yet, because wealth and wages are so highly correlated with income, most sources we studied indicated that income can be a sufficient—albeit terse—measure for generalizing spending capability.

Redefining Competition in Health Care

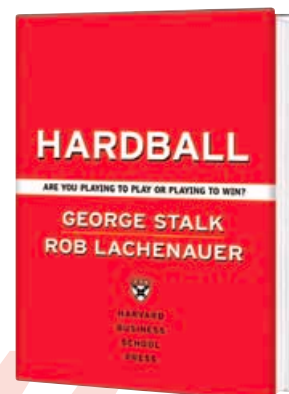
Michael E. Porter and Elizabeth Olmsted Teisberg ("Redefining Competition in Health Care," June 2004) missed one competitive shift in the health care industry that would be simple, effective, and politically realistic: Give employees the same health care tax deductions that corporations currently enjoy.

Congress created the present tax laws when a 40- to 50-year career at a single company was the norm. Employers were allowed to deduct the premiums they paid for employee health insurance. They were able to simultaneously provide a valued benefit to employees and lower their tax liability.

Now employees change companies often, take leaves of absence, or start their own businesses. These types of career changes all have health plan consequences—changes in costs, changes in family physicians, new rules, and new approved drug lists. Some families are so intimidated by the changes, they choose to gamble and go uninsured.

If Congress gave individuals the same tax benefits as employers, however, employees would not be economically bound to the health plans of their employers. If an employee did not like the plan offered by his employer, he could shop for his own plan and deduct the premiums from his individual taxes. If he left the company for any reason, he could take his health plan with him.

This shifts the focus of competition, just as Porter and Teisberg suggest, from parties who may not have patients' best



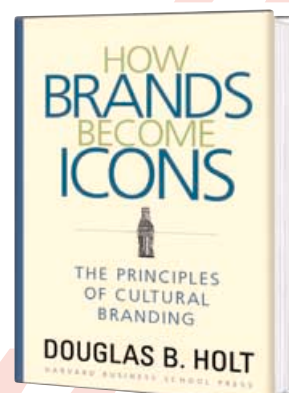
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interest in mind (employers) to ones who do (the employees themselves). The tax law changes would be relatively minor, and they would not cost the government any revenue since deductions taken by individuals would be shifted from those taken by companies.

Warren Edwards

*Competitive Cost Analyst
Advanced Micro Devices
Austin, Texas*

I recently left Wall Street after 12 years as an analyst covering health care, and I really enjoyed Porter and Teisberg's article. As someone who was involved in the capitalization of many of the organizations they discuss in the piece, I think many of the authors' points were right on target. I've always felt that the real problem in health care was that the people who get the service don't pay for it or make decisions about what kind of service they are going to get. That is a recipe for both cost and quality disaster in a market. None of the reforms over the past 25 years have addressed this. One fledgling movement is attempting to get at this issue: defined-contribution health plans and medical savings accounts. Obviously, the tax issues are manifold and serious. But by returning the decision rights to the people who are actually going to get the service, we would go a long way toward reintroducing the competition that the authors rightly identify as missing in the system.

Christian Hester

Alexandria, Virginia

Oil and Wasser

I enjoyed Byron Reimus's splendid case study "Oil and Wasser" (May 2004) on the problems of merging businesses from different cultures.

I note from his bio that Reimus is based in Philadelphia, but I can infer from his text that he is neither a Brit nor fully attuned to UK cultural peculiarities. I can't imagine a UK chairman "hollering" at his HR director, and it has been decades since the latter would

have attempted to quiet the former with a weak "But sir..." even if the former happens to be a knight of the realm.

No Englishman, let alone a 49-year-old father of two teenagers, would contemptuously differentiate a German from himself as "some sausage-eater"—although he might argue that his German peers didn't know a real sausage from a wrong one. And, although Reimus has recognized that London has pubs (as well as, rather than instead of, bars) and that they serve bitter as well as Guinness (Irish) and lager (German... and American and Australian), he doesn't know that in a UK pub (unlike a German bar—or even a U.S. bar?) you pay for your drink when you ask for it, not after you've finished it.

For stories just as for mergers, it's not big strategies but little details that matter most. If you look after the pennies, the pounds will look after themselves. As we say in England.

Rupert Merson

*Partner
BDO Stoy Hayward
London*

What Makes an Effective Executive

Peter Drucker's theories about "doing the right things right" became religion for managers in the former Soviet Union who, after 1985, dared to lead their companies under absolutely new conditions. Before perestroika, executives were focused on the efficiency part of Drucker's formula (doing things right) rather than worrying about the effectiveness part (what are the right things?).

Leaders of the organizations that succeeded in this new environment did, and still do, follow the eight-plus-one practices that Drucker describes in "What Makes an Effective Executive" (June 2004). But the way the author defines these practices lets too many executives believe they are effective.

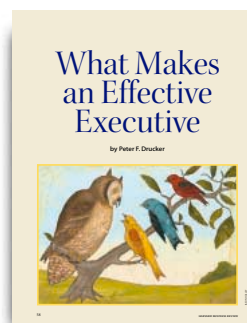
Specifically, an executive's effectiveness should not be considered separate from the effectiveness and health of the whole organization. Those managers who have successfully destroyed, or are destroying, their organizations would not recognize for themselves the warning signs raised in Drucker's article. I've observed this firsthand.

Despite the fact that organizations in the Ukraine (where I live and work) actively import the world's best business know-how—in the form of translated books and training programs—the practice of management here is still dysfunctional. Many of our senior executives are most often concerned not that the right things are getting done but that things will get done without them. They ignore the urgent need to improve productivity and to get people to collaborate—yet, these managers believe they are effective executives. Their organizations are burdened with internal transactional costs because these well-trained, well-paid managers review and adjust every project, in the hopes of making themselves indispensable.

The paradox is that these executives are mostly not Soviet-style directors. They are quite young and do all the things that great leaders seemingly should. They have strong communication skills; they create action plans; and they run productive meetings. They read articles and books by the likes of Peter Drucker, Henry Mintzberg, and Tom Peters. They study in their MBA classes what Jack Welch did at GE—and are impressed.

What they do not do is manage effectively. What they call "management" or "leadership" is nothing more than their

attempts to block real productivity inside their organizations. This keeps them very busy—up to the moment when the business models of their companies are not able to satisfy their ambitions. Then they leave to find new opportunities.



In one company my colleagues and I have studied, the CEO's main concern the past 20 months has been poor communication between the production, marketing, and sales departments. But even the youngest managers in those units understand that the real problem is organizational design.

The departments are assigned to do things in areas in which they have no direct impact. For instance, marketing people are asked to manage new product launches, but they are unable to do this task efficiently because they are dependent on the resources of the sales and production departments, which have their own priorities. As a result, everyone is responsible for everything and nothing, at the same time. Unit managers waste their time and energy deflecting blame for poor performance and casting it on colleagues from other departments. For his part, the CEO appears busy and creative – after all, he's trying to improve communications—but he isn't eliminating the root causes of problems and appropriately allocating responsibility.

I'm concerned that Drucker's latest brilliant article may be perceived by such managers as a sort of encouragement to take advantage of management imperfections rather than a request to reconsider their socially harmful behaviors. Drucker is right when he says that "even the most brilliant executive is human and thus prone to mistakes and prejudices." It is necessary, therefore, to install mechanisms that would enable organizations and executives to develop in sync, to the benefit of both parties and to the detriment of neither.

Vladislav Beloshapka

*Director
Centre for Management and
Organizational Development
Kyiv, Ukraine*

Erratum: An error appeared on page 103 of the September 2004 article "Diversity as Strategy," by David A. Thomas. Rosa Parks refused to give up her seat on the bus in Montgomery, Alabama, not in Birmingham. HBR regrets the error.

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11.18.04
MASTERING MERGERS
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**David Harding
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FORETHOUGHT

Look First to Failure. Why shouldn't engineers study success? Because failures tell you so much more, civil engineering professor Henry Petroski contends. Reprint F0410A

The Ties That Bind. Too much friendship can make teams insular and ineffective, Joe Labianca's research shows. Far better for team members to socialize across the company. Reprint F0410B

The Littlest Sales Force. Software CEO Bernard Liautaud explains how he's kept growth manageable by building his global sales force incrementally. Reprint F0410C

Executive Psychopaths. They're in your organization—and they're easy to mistake for high potentials. But psychologists Robert Hare and Paul Babiak are readying a test to flush them out. Reprint F0410D

Separation Anxiety. Should the CEO and chair be one person or two? It doesn't matter, argues corporate governance professor Charles Elson. Reprint F0410E

The Light Fantastic. Solid-state is the first new lighting technology in 100 years. Soon it may drastically reduce your costs. Reprint F0410F

The Truth About GDP Growth. Oil shocks, war, tax cuts, deficits, market bubbles—nothing has really affected the long-run rate of GDP growth in the last 30 years. Reprint F0410G

The Maternal Wall. Working women are well respected at the office—until they have children, finds law professor Joan C. Williams. Reprint F0410H

Feedback Backlash. You can overdo feedback, HR professor Alain Gosselin's field research reveals. Reprint F0410J

The Joke's on Me. Humorist and Clinton speechwriter Mark Katz reveals the awesome power of self-deprecation. Reprint F0410K

Leapfrogging R&D. CEO Herb Baum thinks R&D is not the same as innovation, and he thinks innovation should be everyone's business at Dial. Reprint F0410L

Book Reviews. How followers make leaders toxic, the origin of brands, building to order, making sense of George W. Bush's economic policy.

Page 35

HBR CASE STUDY

Civics and Civility

Leigh Buchanan

The Denver office of the Clarion Company, a \$30 million full-service marketing firm, has always been a politics-free zone. Non-work conversations revolve around families, romances, and the state of the powder at Aspen. If the office sometimes seems detached from the wider world, no one cares.

But that changes with the arrival of Marcus Lippman. A senior project manager hired away from a rival firm in Chicago, Marcus is both charming and aggressive about meeting his new colleagues. During morning encounters in the mail room or kitchenette, he often alludes to the day's headlines. In particular, Marcus follows the presidential campaign with an avidity his colleagues reserve for the fate of contestants on *American Idol*. Those informed enough to respond generally do so. Over time, others join in.

Politics soon enters the office bloodstream. Employees sense a new energy, a feeling of engagement that intensifies as the campaign season progresses. Many employees make contacts in the business community as they pursue extracurricular political activities. But there are downsides as well. Out-of-control e-mail debates sap productivity. Feelings get hurt. And general manager Joan Mungo discovers that political views play an important part in determining who rises to power in the company. As tensions mount, Joan wonders: Should she do something to stanch political debate, and if so, what?

Commenting on this fictional case study are Brian Flynn, the CEO of Schlossberg:Flynn, a business-development consulting firm; Frank Furedi, a professor of sociology at the University of Kent in England; Paula Brantner, the program director at Workplace Fairness, a nonprofit organization; and James E. Rogers, the CEO of Cinergy, a diversified energy company.

Reprint R0410A

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HBR AT LARGE

Presenteeism: At Work – But Out of It

Paul Hemp

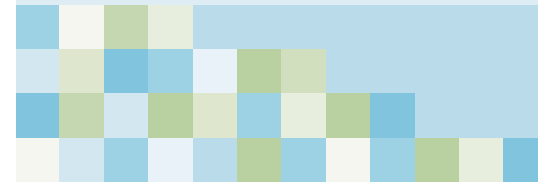
Employers are beginning to realize that they face a nearly invisible but significant drain on productivity: presenteeism, the problem of workers' being on the job but, because of illness or other medical conditions, not fully functioning. By some estimates, the phenomenon costs U.S. companies over \$150 billion a year – much more than absenteeism does. Yet it's harder to identify. You know when someone doesn't show up for work, but you often can't tell when, or how much, poor health hurts on-the-job performance.

Many of the health problems that result in presenteeism are relatively benign. Research in this emerging area of study focuses on such chronic or episodic ailments as seasonal allergies, asthma, headaches, depression, back pain, arthritis, and gastrointestinal disorders. The fact is, when people don't feel good, they simply don't perform at their best. Employees who suffer from depression may be fatigued and irritable – and, therefore, less able to work effectively with others. Those with migraine headaches who experience blurred vision and sensitivity to light, not to mention acute pain, probably have a hard time staring at a computer screen all day.

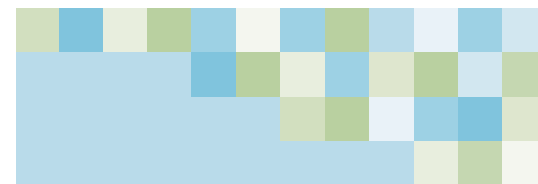
A number of companies are making a serious effort to determine the prevalence of illnesses and other medical conditions that undermine job performance, calculate the related drop in productivity, and find cost-effective ways to combat that loss. Indeed, researchers have discovered that presenteeism-related declines in productivity sometimes can be more than offset by relatively small investments in screening, treatment, and education. So organizations may find that it pays to make targeted investments in employees' health care – by covering the cost of allergy medication, for instance, or therapy for depression.

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Page 62

Seven Surprises for New CEOs Michael E. Porter, Jay W. Lorsch, and Nitin Nohria

As a newly minted CEO, you may think you finally have the power to set strategy, the authority to make things happen, and full access to the finer points of your business. But if you expect the job to be as simple as that, you're in for an awakening. Even though you bear full responsibility for your company's well-being, you are a few steps removed from many of the factors that drive results. You have more power than anybody else in the corporation, but you need to use it with extreme caution.

In their workshops for new CEOs, held at Harvard Business School in Boston, the authors have discovered that nothing—not even running a large business within the company—fully prepares a person to be the chief executive. The seven most common surprises are:

- You can't run the company.
- Giving orders is very costly.
- It is hard to know what is really going on.
- You are always sending a message.
- You are not the boss.
- Pleasing shareholders is not the goal.
- You are still only human.

These surprises carry some important and subtle lessons. First, you must learn to manage organizational context rather than focus on daily operations. Second, you must recognize that your position does not confer the right to lead, nor does it guarantee the loyalty of the organization. Finally, you must remember that you are subject to a host of limitations, even though others might treat you as omnipotent. How well and how quickly you understand, accept, and confront the seven surprises will have a lot to do with your success or failure as a CEO.

Reprint R0410C; HBR OnPoint 807x;
OnPoint collection "What New CEOs
Need to Know" 8177

Page 76

Blue Ocean Strategy W. Chan Kim and Renée Mauborgne

Despite a long-term decline in the circus industry, Cirque du Soleil profitably increased revenue 22-fold over the last ten years by reinventing the circus. Rather than competing within the confines of the existing industry or trying to steal customers from rivals, Cirque developed uncontested market space that made the competition irrelevant.

Cirque created what the authors call a blue ocean, a previously unknown market space. In blue oceans, demand is created rather than fought over. There is ample opportunity for growth that is both profitable and rapid. In red oceans—that is, in all the industries already existing—companies compete by grabbing for a greater share of limited demand. As the market space gets more crowded, prospects for profits and growth decline. Products turn into commodities, and increasing competition turns the water bloody.

There are two ways to create blue oceans. One is to launch completely new industries, as eBay did with online auctions. But it's much more common for a blue ocean to be created from within a red ocean when a company expands the boundaries of an existing industry.

In studying more than 150 blue ocean creations in over 30 industries, the authors observed that the traditional units of strategic analysis—company and industry—are of limited use in explaining how and why blue oceans are created. The most appropriate unit of analysis is the strategic move, the set of managerial actions and decisions involved in making a major market-creating business offering.

Creating blue oceans builds brands. So powerful is blue ocean strategy, in fact, that a blue ocean strategic move can create brand equity that lasts for decades.

Reprint R0410D

Page 86

How Industries Change Anita M. McGahan

It's fairly obvious: To make intelligent investments within your organization, you need to understand how your whole industry is changing. But such knowledge is not always easy to come by. Companies misread clues and arrive at false conclusions all the time.

To truly understand where your industry is headed, you have to take a long-term, high-level look at the context in which you do business, says Boston University professor Anita McGahan. She studied a variety of businesses from a cross section of industries over a ten-year period, examining how industry structure affects business profitability and investor returns. Her research suggests that industries evolve along one of four distinct trajectories—*radical*, *progressive*, *creative*, and *intermediating*—that set boundaries on what will generate profits in a business. These four trajectories are defined by two types of threats. The first is when new, outside alternatives threaten to weaken or make obsolete *core activities* that have historically generated profits for an industry. The second is when an industry's *core assets*—its resources, knowledge, and brand capital—fail to generate value as they once did.

Industries undergo radical change when core assets and core activities are both threatened with obsolescence; they experience progressive change when neither are jeopardized. Creative change occurs when core assets are under threat but core activities are stable, and intermediating change happens when core activities are threatened while core assets retain their capacity to create value.

If your company's innovation strategy is not aligned with your industry's change trajectory, your plan for achieving returns on invested capital cannot succeed, McGahan says. But if you understand which path you're on, you can determine which strategies will succeed and which will backfire.

Reprint R0410E

Page 102

The Triple-A Supply Chain

Hau L. Lee

Building a strong supply chain is essential for business success. But when it comes to improving their supply chains, few companies take the right approach. Many businesses work to make their chains faster or more cost-effective, assuming that those steps are the keys to competitive advantage. To the contrary: Supply chains that focus on speed and costs tend to deteriorate over time.

The author has spent 15 years studying more than 60 companies to gain insight into this and other supply chain dilemmas. His conclusion: Only companies that build supply chains that are agile, adaptable, and aligned get ahead of their rivals. All three components are essential; without any one of them, supply chains break down.

Great companies create supply chains that respond to abrupt changes in markets. Agility is critical because in most industries, both demand and supply fluctuate rapidly and widely. Supply chains typically cope by playing speed against costs, but agile ones respond both quickly and cost-efficiently.

Great companies also adapt their supply networks when markets or strategies change. The best supply chains allow managers to identify structural shifts early by recording the latest data, filtering out noise, and tracking key patterns.

Finally, great companies align the interests of the partners in their supply chains with their own. That's important because every firm is concerned solely with its own interests. If its goals are out of alignment with those of other partners in the supply chain, performance will suffer.

When companies hear about the triple-A supply chain, they assume that building one will require increased technology and investment. But most firms already have the infrastructure in place to create one. A fresh attitude alone can go a long way toward making it happen.

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Leading a Supply Chain Turnaround

Reuben E. Slone

Just five years ago, salespeople at Whirlpool were in the habit of referring to their supply chain organization as the “sales disablers.” Now the company excels at getting products to the right place at the right time—while managing to keep inventories low. How did that happen? In this first-person account, Reuben Slone, Whirlpool’s vice president of Global Supply Chain, describes how he and his colleagues devised the right supply chain strategy, sold it internally, and implemented it.

Slone insisted that the right focal point for the strategy was the satisfaction of consumers at the end of the supply chain. Most supply chain initiatives do the opposite: They start with the realities of a company’s manufacturing base and proceed from there. Through a series of interviews with trade customers large and small, his team identified 27 different capabilities that drove industry perceptions of Whirlpool’s performance. Knowing it was infeasible to aim for world-class performance across all of them, Slone weighed the costs of excelling at each and found the combination of initiatives that would provide overall competitive advantage.

A highly disciplined project management office and broad training in project management were key to keeping work on budget and on benefit. Slone set an intense pace—three “releases” of new capabilities every month—that the group maintains to this day. Lest this seem like a technology story, however, Slone insists it is just as much a “talent renaissance.” People are proud today to be part of Whirlpool’s supply chain organization, and its new generation of talent will give the company a competitive advantage for years to come.

Reprint R0410G

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BIG PICTURE

America’s Looming Creativity Crisis

Richard Florida

The strength of the American economy does not rest on its manufacturing prowess, its natural resources, or the size of its market. It turns on one factor—the country’s openness to new ideas, which has allowed it to attract the brightest minds from around the world and harness their creative energies.

But the United States is on the verge of losing that competitive edge. As the nation tightens its borders to students and scientists and subjects federal research funding to ideological and religious litmus tests, many other countries are stepping in to lure that creative capital away. Ireland, Canada, Australia, New Zealand, Denmark, and others are spending more on research and development and shoring up their universities in an effort to attract the world’s best—including Americans. If even a few of these nations draw away just a small percentage of the creative workers from the U.S., the effect on its economy will be enormous.

In this article, the author introduces a quantitative measure of the migration of creative capital called the Global Creative-Class Index. It shows that, far from leading the world, the United States doesn’t even rank in the top ten in the percentage of its workforce engaged in creative occupations. What’s more, the baby boomers will soon retire. And data showing large drops in foreign student applications to U.S. universities and in the number of visas issued to knowledge workers, along with concomitant increases in immigration in other countries, suggest that the erosion of talent from the United States will only intensify.

To defend the U.S. economy, the business community must take the lead in ensuring that global talent can move efficiently across borders, that education and research are funded at radically higher levels, and that we tap into the creative potential of more and more workers. Because wherever creativity goes, economic growth is sure to follow.

Reprint R0410H

Page 139

BEST PRACTICE

Cultural Intelligence

P. Christopher Earley and Elaine Mosakowski

In an increasingly diverse business environment, managers must be able to navigate through the thicket of habits, gestures, and assumptions that define their coworkers’ differences. Foreign cultures are everywhere—in other countries, certainly, but also in corporations, vocations, and regions. Interacting with individuals within them demands perceptiveness and adaptability. And the people who have those traits in abundance aren’t necessarily the ones who enjoy the greatest social success in familiar settings.

Cultural intelligence, or *CQ*, is the ability to make sense of unfamiliar contexts and then blend in. It has three components—the cognitive, the physical, and the emotional/motivational. While it shares many of the properties of emotional intelligence, *CQ* goes one step further by equipping a person to distinguish behaviors produced by the culture in question from behaviors that are peculiar to particular individuals and those found in all human beings. In their surveys of 2,000 managers in 60 countries, the authors found that most managers are not equally strong in all three of these areas of cultural intelligence.

The authors have devised tools that show how to identify one’s strengths, and they have developed training techniques to help people overcome weaknesses. They conclude that anyone reasonably alert, motivated, and poised can attain an acceptable *CQ*.

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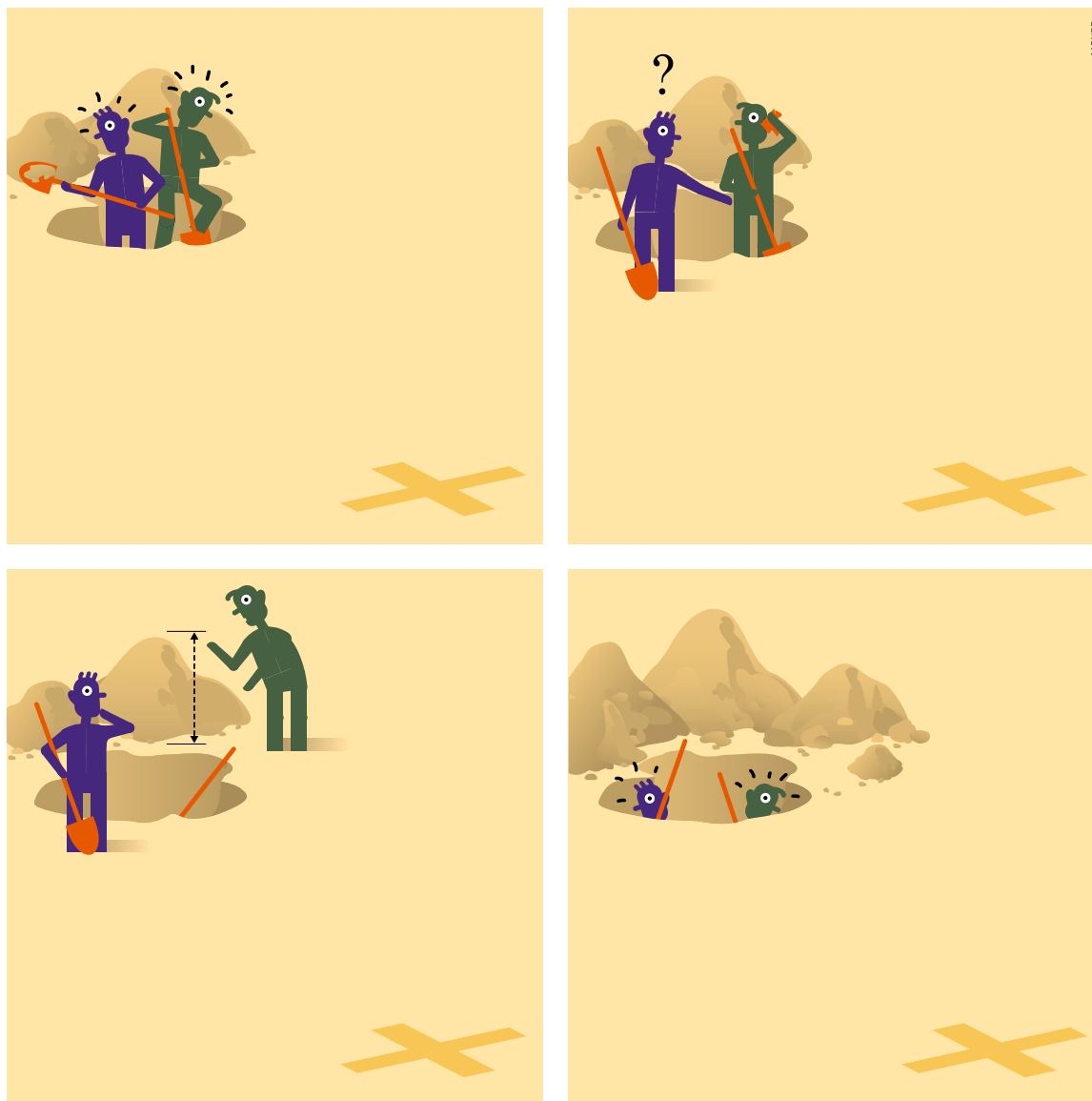
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That Sunk Feeling

The only thing less likely to make a right than two wrongs is one wrong mulishly pursued. We pick an option, make a decision, chart a course. And then it turns out that we have picked, made, or charted incorrectly. What should we do?

When a better choice presents itself, the rational act is to cut our losses and—as the game board dictates—Return to Start. Often, we choose to stick it out instead. That’s because we are influenced by “sunk costs”: investments of time and money that we can’t get back. Having made a deposit, the prospect of “no return” becomes untenable.

A stake in the past should not affect decisions about the future. “Making a mistake and not admitting it is just hurting yourself twice,” David Friedman reminds us in *Hidden Order: The Economics of Everyday Life*. That holds true even when the stake is considerable. As Ralph Waldo Emerson almost put it, a foolish consistency is the hobgoblin of big investments.

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Popping the China question: Will the bubble burst or gently deflate?

Financial markets are worried about a hard landing in China. Should they be?

China's government has tightened credit policy and restricted land supply to cool investment — this is the right policy. Speculative capital poured into China for two years as the Fed cut interest rates to 1%. Ample liquidity triggered an investment boom that exacerbated inflation. The resulting negative real interest rate amplified investment demand and caused a speculative bubble. China may have invested US\$200 billion more than it should; fixed investment may be 20% above trend. This must be brought below trend for a period to absorb the excess.

It is still too early to say whether China will have a soft or hard landing. The measured pace at which the Fed is raising interest rates increases the chances of a soft landing, while the uncontrollable nature of unwinding a speculative property bubble makes a hard landing more likely. In either scenario, the global impact on commodity prices and equipment demand is roughly similar.



Longer term, whether the landing is hard or soft does not make a significant difference. In a soft landing, the economy decelerates to trend after a period of above-trend growth. In a hard landing, the economy decelerates below trend for a period. A hard landing can actually be a good thing, as excess capacity is flushed out quickly, leading to faster recovery in demand and profit. A soft landing brings less pain short term but may retain excess capacity, causing demand to recover slowly and profit margins to stay low for longer.

A slowdown in China affects commodity and equipment industries most. Commodity prices have risen sharply in the past two years on surging domestic demand, and the global equipment sector is booming. Imports to China have doubled since 2001, mainly on demand for commodities and equipment,

so economies specializing in these would be most affected as Chinese demand cools.



Global consumers would benefit from a China slowdown.

Negative real interest rates helped Chinese businesses pay for commodities, causing prices to rise. Higher prices trimmed consumer purchasing power around the world. As China's economy softens and commodity prices revert to trend, consumer purchasing power everywhere should improve.

A government-controlled financial system amplifies China's business cycle. The financial sector does not price risk properly, causing the economy to overshoot in both directions. As the financial system is reformed and becomes more market-based, China's economy will become less volatile.

Cycles matter. From a low base, the industrialization of China has had a long history of rapid growth. However, economic cycles will always come and go, and businesses must plan accordingly. The right strategy is to accumulate cash at cycle peaks and invest at cycle bottoms. China will become a rich country. You can enjoy its wealth, too, if you are still in business.

Andy Xie
Economist

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